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ABSTRACT

At the intersection of teaching and learning, this guide is intended to introduce and update disciplinary faculty on contemporary writing principles and pedagogy. In addition, it is designed to: alert faculty to the ways in which effective writing helps students not only show what they have learned but also to learn, generate, and communicate knowledge; recognize the form the literature of their discipline takes; identify what constitutes competent writing in a particular field; promote writing as a natural and regular part of content area instruction; help students begin to live the mental lives of their professional counterparts; produce student writing that is readable, lucid, and logical and seeks applicability within and beyond the academic discipline; help faculty respond insightfully to writing; know when students need help in writing/thinking that disciplinary faculty can no linger give; and create in departments and/or the college community a philosophical coherence on writing instruction. Chapters in the guide are (1) "Introduction"; (2) "Prewriting and Invention"; (3) "Drafting and Revising"; (4) "Editing and Proofreading"; (5) "Processes of Inquiry"; (6) "Using Sources"; (7) "Research Project or Critical/Analytical Paper"; (8) "Academic Forms of Writing"; (9) "Designing Writing Assignments"; (10) "Sequencing Writing Assignments"; (11) "Responding to and Evaluating Writing"; and (12) "Collaboration, Conferences, and Computers." A three-part appendix contains evaluation forms; checklists; exercises; articles on topics such as stress, plagiarism, and the scientific method; course descriptions, course proposal guidelines, and ways to evaluate textbooks. (RS)

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Writing in the Majors

A Guide for Disciplinary Faculty

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at
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Therapy in Writing: A Psycho-educational Enterprise (Scholarship)
The Psychology of Writing: The Affective Experience (Scholarship)
Presences of Mind: Writing and the Domain Beyond the Cognitive (Scholarship)
as it happens (Poetry)
Studies on Zone (Poetry)
Court of Common Pleas (Poetry)

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PREFACE

Education isn't designed to make people comfortable. It's designed to make them think.
The Chronicle of Higher Education

Having written and read a number of research reports, edited a journal and a psychology text, and published three scholarly books, three poetry collections, articles, and poems, I received a call some years ago from my daughter, a graduate student in clinical psychology, several days before she traveled ten hours home for the four-day Thanksgiving holiday. She asked, Mom, how do you write a master's thesis? I gasped: Over the phone? You want me to tell you how to write a proposal for a master's thesis over the telephone? What did they teach you in college? And what have you been doing in graduate school? It certainly wasn't writing. Much of the holiday was spent helping her draft a proposal for her thesis. So much for Thanksgiving. And it spilled over into Christmas and into the spring.

Although **W**riting **A**cross the **C**urriculum (**WAC**) covered the country, although guides to writing in various fields were proliferating, at that time much of the university community was still unenlightened about It. Traditionally, writing was taken for granted as proof of work done. It was used as a means of evaluating established knowledge. Writing just happened. There was little to be learned about it or, if it was to be learned, it was not going to be content faculty who taught it. Writing was not their field. That was done in English.

Not any more. **WAC** unravels that. But **WAC** is not grammar across the curriculum. It is not an update of trends in usage and punctuation. And so, this guide is not a composition text or a set of worksheets for college students. It is also not meant to be a stand-alone text for an upper-division course for majors.

This guide is a product of faculty development undertaken at Brockport to develop course objectives, competencies or learning outcomes, and curricula for incorporating advanced writing within the disciplines. Faculty who have undergone the seminars will recognize many of the ideas and activities here. But this guide is available to all disciplinary instructors. As a faculty resource, it is designed to reinforce or supplement instruction in the content areas. Faculty may use parts of it profitably in conjunction with content materials. **WAC** is about changing teaching, not just student learning. This guide helps its readers do that.

To justify the investment of instructor time in such an enterprise, I urge administrators to limit enrollment of any **WAC**-intensive courses in order to allow multiple drafting, critical thinking, and deep revision to occur.

OBJECTIVES OF THE *GUIDE*

The objectives of disciplinary writing are broad enough to justify its use in fulfilling any college requirement. At the intersection of teaching and learning, this guide is intended to:

1. Introduce and update disciplinary faculty on contemporary writing principles and pedagogy.
2. Alert faculty to the ways in which effective writing helps students not only show what they have learned but also to learn, generate, and communicate knowledge.
3. Recognize the form the literature of their discipline takes.
4. Identify what constitutes competent writing in a particular (and in related) field(s).
5. Promote writing as a natural and regular part of content area instruction.
6. Help students begin to live the mental lives of their professional counterparts.
7. Produce student writing that is readable, lucid, and logical and seeks applicability within and beyond the academic discipline.
8. Help faculty respond insightfully to writing.
9. Know when students need help in writing/thinking that disciplinary faculty can no longer give.
10. Create in departments and/or the college community a philosophical coherence on writing instruction.

I apologize on a few fronts: These materials are far from exhaustive. The chapters are uneven because the materials came to me unevenly across all subjects areas. Examples and exercises, for example, are compiled from the faculty at Brockport as well as those from other campuses and so reflect their particular interests and strengths. Second, my interest and strength is on describing a large, but idiosyncratic, writing process. It is hard to order into linear prose those processes whose very claim is that they are without order. I have done my best to credit all sources with their contributions. They appear in the Endnotes which are not yet available. To have waited to publish the *Guide* until all the citations were fully clarified would have meant further delaying its appearance. I take full responsibility for inaccuracies, omissions, and confusions. The Endnotes will be printed separately.

I want to acknowledge the programs and persons who in unnumbered ways contributed their expertise, knowledge, ideas, materials, and words to this guide. I am grateful for a 1997 Excellence in Teaching award and to the Dean of Letters and Sciences, Robert McLean, who provided the funds to bring it to print. A special debt goes to graduate student Karen Renner for copy editing and formatting the unwieldy manuscript. I want also to thank Paul DesOrmeaux whose expert eyes put the finishing touches on it. I thank the English department for its generosity as a long-term support system for this work. Last, I am grateful to the faculty who undertook the seminars and contributed to the guide in both materials and perspective, their collegiality and commitment.

Alice G. Brand
May, 1998

TABLE OF CONTENTS

PREFACE

PART 1 1

Chapter 1 Introduction **3**
Models of Writing Across the Curriculum 4
Constraints 5
Overview of the Writing Process 7
Assumptions Old and New 9
The Written Product 15
Sample Student Fact Sheets 21

Chapter 2 Prewriting and Invention **24**
Invention Methods 25
Notes on Fluency and Writing Anxiety 42

Chapter 3 Drafting and Revising **45**
Details and Development 48
The Thesis Statement 52
Organization 56
Coherence 63
Deep Revision 74
Writing Pedagogy Strands 83

Chapter 4 Editing and Proofreading **85**
Style and Expression 85
Tone 101
Usage, Grammar, and Punctuation Trends 114
Correctness 117

PART 2 **123**

Chapter 5 Processes of Inquiry **125**
The Observation Process/The Lived Experience 127
Defining and Classifying 153

Chapter 6 Using Sources **173**
Documentation 173
Quoting, Paraphrasing, and Summarizing 179

Controlled Research: Testing the Literature 194
Plagiarism 205

Chapter 7 Research Project or Critical/Analytical Paper **216**
The Research Process 217
The Literature Review 223
The Research Draft 231

Chapter 8 Academic Forms of Writing **244**
The Professional Statement 244
The Essay Exam: Writing in Class 251

PART 3 **263**

Chapter 9 Designing Writing Assignments **265**
Research Background 266
Heuristics for Designing Writing Assignments 271
Words That Prompt Cognitive Processes 271
Sample Writing Prompts 284

Chapter 10 Sequencing Writing Assignments **291**
Models of Inquiry 292
Samples of Sequenced Writing Prompts 295

Chapter 11 Responding to and Evaluating Writing **308**
Response to Writing 309
Taxonomies of Responses 312
Sample Responses to Student Writing 312
Large-Scale Writing Assessment 323
Portfolios 345
Sample Grading or Evaluation Grids 351
How to Handle the Paper Load 352

Chapter 12 Collaboration, Conferences, and Computers **356**
Collaborative Writing or the Workshop Approach 356
The Disciplinary + Writing Conference 367
Computers and Writing 370

APPENDIX **375**

ENDNOTES

PART 1

CHAPTER 1
INTRODUCTION

I never know something as well as when I first write it.
Physicist Van Allen (Belt)

I never realize how little I understand until I try to write about it, and then when I have written about it, I realize how much I have learned.
Mathematics student, *The Chronicle of Higher Education*

If you haven't written it, you haven't done it.
Blanche Schwartz, New York City school administrator

Universities across the United States have found the traditional, freshman composition courses inadequate to prepare students for the critical thinking and writing expected in their major and in the professional world beyond. As a result, there has been a steady rise in the number of colleges requiring writing at the upper division--likewise in graduate or professional programs where students were assumed to be competent writers when in fact they were not.[1]

Students involved in content courses are traditionally introduced to that discourse by *reading* in it. That we teach reading *before* writing seems to me wrong-headed because, technically speaking, we can't read a syllable until it has been written. But until two decades ago, direct instruction in interdisciplinary writing was nonexistent or marginal. Originating in Great Britain during the 1970s, the **W**riting **A**cross the **C**urriculum (**WAC**) movement was borne of the belief that academic writing is not the exclusive responsibility of the English department but a joint responsibility of all academic disciplines.

Being a psychology or business major, for example, means more than mastery of knowledge. Writing is a logical extension of that content. It is a way of learning content. Writing in a field promotes active participation in that field. It thus makes sense for the academic disciplines to share responsibility for the writing in their specialties because it is through writing that the thinking about them materializes and endures. Major bench marks in life and in the professions are invariably documented in writing. Writing is everywhere, like breathing, like God.[2] Take a pencil away from people for a few days and see what would happen. Until we stop talking, the pen will still remain pretty mighty.

Disciplinary writing is valuable at every point in higher education; however, it is often mounted at the upper-division undergraduate level. The central reasoning is that as students mature and their academic or career interests crystallize, they practice writing within their majors through which they become familiar with the discourse of their field. The thinking here is that students customarily declare majors during their sophomore years, and motivation for writing has been found high when it is linked to a content area of the student's choice. It also allows majors to acquire some content in their discipline before taking a WAC course. These courses serve as venues into the modes of thinking, writing, and research in the various fields. The additional virtue of upper division writing courses at Brockport is that they would meet the needs of transfer students, who comprise over half of our upper-division student body and arrive with widely varying writing skills.

Many colleges find it beneficial to group writing courses by standard professional or disciplinary categories.[3] Grouping majors from the same or related disciplines permits them to interact with those in similar fields yet makes more efficient the learning of disciplinary writing conventions, styles, and formats. The thinking also is that upper-division writing is not remedial. Nor is it a writing refresher. Fundamental writing skills are expected to come under control in lower-division writing courses and be reinforced informally in the breadth program. When students leave freshman composition, they should be able to develop quality ideas, arrange them, and edit them for correctness. At the junior/senior level, clarity, logical development, appropriate diction, and style become even more important. When mechanical problems affect overall readability and effectiveness, they receive attention at the Writing Place.

MODELS OF WRITING ACROSS THE CURRICULUM

Several major models of writing across the curriculum have emerged from this movement.[4] Represented by writing specialists Herrington and Walvood, in a first model WAC means writing to learn. This approach teaches instructors from other disciplines how to use writing as an integral part of the learning process. It asks: What can composition contribute to the teaching and learning of subject matter? Here WAC is an instructional device. It uses writing as a tool for gaining mastery over concepts and for exploring knowledge. From this perspective writing is not considered an isolated discipline but integral to all subject areas, crossing itself with any and all areas of study. In this venue writing is not considered a subject but rather a medium. Wherever learning takes place, writing can accompany and accelerate it.[5]

But this model has raised questions about academic writing versus real-world writing. Implicated is a conflict between a reflective perspective from which emerges belletristic essays by the likes of scientist Lewis Thomas and surgeon Richard Selzer and the workaday language of reports, construction site specifications, grant proposals, curricula, intake interviews, and so on. The latter need has produced public universities and two-year colleges with strong career orientations and with terminal degrees in majors such as law enforcement and dental hygiene. But these institutions have little use for belletristic essays. Their job is to get students from point A to point B as quickly and as economically as possible.[6]

The second model, Writing in the Disciplines (WID), concerns itself with writing to communicate in the discipline. As represented by writing specialist Bazerman, actual conventions and methods of inquiry are emphasized. WID is aimed at teaching higher-level thinking and writing in students' chosen fields. In this second model the goal is to introduce students to the discourse of their field so they can become proficient in it.[7] In the WID model we ask: What kind of writing do professionals do in their field? What kind of writing do real dancers or economists do? We don't tell biologists not to use their notes, so we should train students to take good ones.

This guide is grounded principally on WID. It is concerned first with communicating facts and ideas characteristic of the discipline that provides its base. Students learn to think like chemists, historians, nurses, or educators. But by making this the primary objective, this guide necessarily expects that students will realize the other goal: learning the content of their discipline (WAC).

Regardless of model, writing-intensive disciplinary courses are generally marked by the following[8]:

- The course integrates several writing tasks and processes into the term's work.
- Writing skill criteria are specified in the course syllabus by the instructor or department.
- Evaluation of writing comprises a significant portion of students' grades.

CONSTRAINTS

As we would expect, there are practical problems associated with direct instruction in writing. What concerns, what unresolved issues do faculty identify as limiting opportunities for writing?

■ Time

This difficulty has to do with the amount of time faculty need to cover content versus time to "teach" writing. Time for instructors. Time for students. Rising class sizes, rising work load, lack of administrative recognition and support are additional proverbial issues. This guide is a compilation of suggestions about how disciplinary faculty may integrate writing into their upper division courses without abandoning their personal lives and other academic commitments. True, the more knowledge available about a discipline, the harder it is to teach that knowledge and the writing of it at the same time. There is always some sort of trade-off.

Another way to look at the issue is to calculate student time on academic tasks: the conventional wisdom is that for every contact hour, two hours of student preparation time are appropriate. For a standard 45-hour course, we would ideally divide preparation time into 45 hours for drafting/revising/researching and 45 hours for reading/studying/researching. Practically speaking, over the long haul, we write about one page an hour, *including* revisions and collaborative enterprises. So we can expect something like 30 pages a semester. George Mason University specifies an average of 20 pages a semester--and with revisions, between 30 and 36 pages.[9]

Balance Between Writing and Content

The greatest advantage to writing in the disciplines is that faculty may be *unable* to cover all course material. Place some of the burden for learning on the students themselves. We might try shifting the simpler material to out-of-class activities and replace it with in-class writing and discussion on content. We can alternate lecture sessions with writing sessions. One way to look at the problem: If we can estimate what percentage of our course or courses is given over to reading and listening, then we can try replacing some of it with writing as a medium of instruction.

Professorial Skill

A third problem arises as to the ability of disciplinary faculty to teach writing adroitly. Understandably, faculty feel that they carry enough of the academic burden of delivering content without adding a discursive one. They may feel that correcting writing is outside their area of expertise. They may not know what is reasonable or fair to expect of their students discursively. Or they don't believe writing is part of their teaching responsibility.

My answer is this: Effective writing does not happen by divine inspiration. Nor is it mysterious. Nor, for that matter, is the teaching of it. The entire field of composition studies (to say nothing of creative and professional writing programs) is based in the idea that writing is a craft that can be learned, and improvement in that craft is discernible over time--though it may not always be apparent in one semester.[10] We can identify the conventions that professionals use in their writing and can teach them. Most important, we can strive for our own obsolescence.

Why should departments be involved in writing? Writing specialists and English instructors teach students how to write in general, but they can't teach all students how to write proficiently in every discipline. While English faculty cannot teach students what to write in a chemistry experiment, they can help students organize their data into clean, clear, coherent prose.

Is it easier for writing specialists to teach a particular content? Or is it easier for content faculty to teach writing in a particular discipline? While there are sometimes good matches between writing generalists and particular disciplines, it is unrealistic for English instructors to be familiar with the nomenclature of biology, art, or criminal justice--much less the forms and conventions of their respective discourses. Indeed, it seems more likely to find content instructors who read and write in their field than writing instructors who also have a working knowledge of particular subjects. Furthermore, who is in a better position than disciplinary faculty to know their majors? Disciplinary faculty are indeed responsible for the major, the content as well as the thinking in it. Its logical extension is writing. The reasoning is also that disciplinary faculty are experts in their field. They read and write in it. They recognize the critical importance of quality material and deplore its weakness when their majors exhibit it. Disciplinary faculty are thus in unique positions to teach their majors how to write proficiently in their field.

■ Grading

A related issue concerns evaluating writing. Some students and faculty argue that writing is a language skill; it is unfair to grade students on those skills in disciplinary courses. Furthermore, infusing courses with writing places the extra burden of reading and marking papers on instructors while students are burdened with writing them. Part of the issue is that students don't take writing seriously because they think only English professors care about it. Students are known to sneer: This isn't a writing course. You're not supposed to look at my writing!

WAC reverses that thinking. Writing and making it part of a grade beams a clear signal to students that thinking on paper is important. There should be no split loyalties between content and writing. We must not separate the dancer from the dance. Part of what we say is how we say it. Juggling the paper load can be handled responsibly and manageably (see Chapter 11).

OVERVIEW OF THE WRITING PROCESS

Good writing--in any field--seldom springs full-grown from a flash of inspiration. Good writing generally reflects an entire *process* of thinking, talking, jotting, drafting, revising, and editing. Because academic assignments tend to focus on a desired *product*, many students have not learned the composing processes and strategies of successful writers. We can help students write more effectively through a process of prewriting or inventing, drafting, revising, editing, and proofreading.

■ Prewriting and Invention (Chapter 2)

Writing starts with ideas. Inventing or coming up with ideas is probably the most difficult of rhetorical skills, the complexity of just getting writing started. Where do ideas come from? Do we discover things already there? Or do we create ideas? Many writers have trouble generating *enough* text, or adequate details and examples, or the best approaches, or illustrations or arguments because they do not spend enough time on inventing or prewriting, as it is sometimes called. Developing the ability to generate enough or even too much material may be an important step toward improving writing.

In prewriting writers use different strategies through which they organize their thinking. Some use elaborate outlines. Some use idea outlines. Others begin writing and depend on one idea to trigger another. A few begin writing the end of a piece first. Others write the middle first, then the ending, and finally the introduction. Moreover, each discipline provides heuristics to teach serious students of the field how to go about understanding and making knowledge in it. All of these are acceptable. We may ask students to think about their writing styles with the following checklist:

Composing Style Checklist

Name________________________

Which method of writing do you gravitate to if you are not assigned a specific method for generating a piece of writing? Check one:

Do you just start and let ideas come to you as you write? (Freewrite method)___________________
Or
Do you outline and plan before you start a full essay? (Structured/Planning method) ____________
Or
Do you have another method? (Please explain): ____

I choose this method when: (check all that apply)

_____The topic seems to suggest that approach
_____The writing is done on my own
_____The writing is done at home
_____I have limited time
_____I know a lot about the topic
_____Other reasons:______________________________________
_____The writing is required
_____The writing is done in class
_____I have a lot of time
_____I don't know much about the topic

Additional comments:

■ **Drafting and Revising** (Chapter 3)

Because many writing specialists consider all writing a form of rewriting, students must get down a first draft, no matter how poor. After that, options for revising are available: Students reread their own papers carefully and improve them by correcting and updating, where necessary. Students may use checklists to help them revise. Feedback from instructors, peer groups, with structured or open-ended guidelines, are also useful at this stage--before the piece is etched in stone.

■ **Editing and Proofreading** (Chapter 4)

Mechanical correctness becomes important as students move through the editing process. We need to set standards appropriate to the writing task. We can do an error analysis to help students identify mechanical problems. We can teach students to correct that problem in a comment on a paper or at a conference, working on two or three of the most glaring errors first. Or we can refer students to their handbooks, an English instructor, or the writing lab.

Priorities and Subtasks of the Writing Process[11]

Choices	Activity
Thematic (Choice, Unity, and Development of Topic)	Choose a subject and thematic design for generating and organizing ideas; select adequate points, details, or examples from observation, reading, or other sources of knowledge.
Rhetorical (Audience and Attitude)	Keep in mind specific readers or an audience and their background and expectations regarding the subject and writer. Maintain a consistent point of view, tone, and style.
Generic (Genre or Type of Writing Project)	Determine the kind of writing required for the subject, circumstances, and audience, and the complexities involved. These may range from a simple personal note to the intricacies of an artistic form such as a screenplay.
Formal (Layout and Coherence of Structure and Format)	Use transitional devices, paragraphing, subsections, subheads, typeface, or other reader-based structural devices, composition components, and conventions of manuscript format.
Syntactic (Sentence Structure)	Maintain logical word order, grammatical structure, coordination, subordination, and effective closure of independent or sentence units.
Lexical (Diction or Word Choice)	Choose words that convey meaning and style accurately and effectively. Keep a standard college dictionary handy.
Grapholectical (Standard Written English)	Use the dialect and conventions of standard written discourse as distinguished from idioms or irregular patterns of speech.
Graphical (Spelling and Punctuation)	Use standard orthography and conventional graphic devices of mechanics and punctuation. Do not neglect final editing.
Scribal (Handwriting or Typing and Proofreading)	Use legible handwriting or accurate keyboarding, and proofread the final copy for surface feature errors.

ASSUMPTIONS: OLD AND NEW

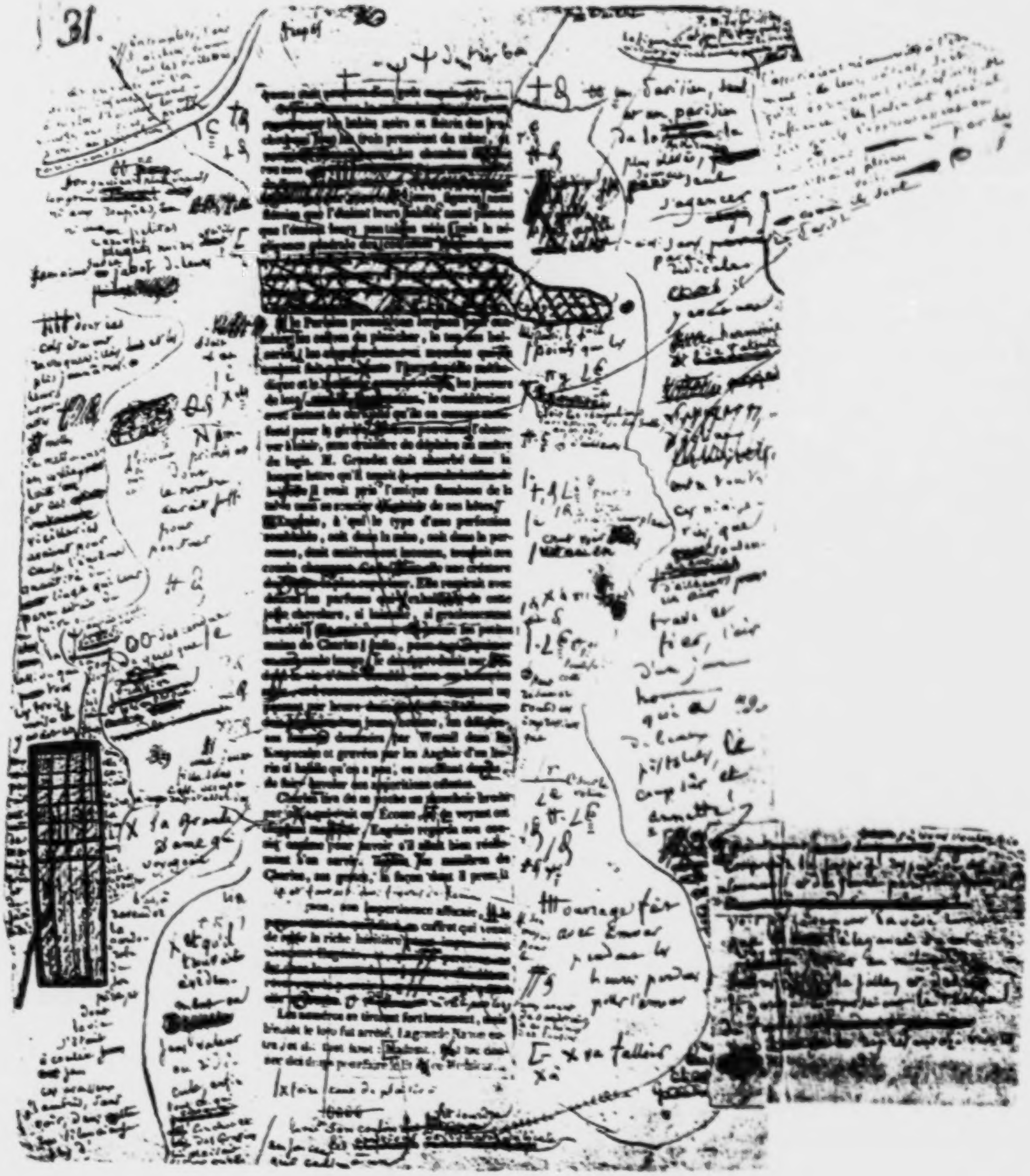
■ Myths and Mistakes We've Made with Writing[12]

1. *We must think before we write.* For those of us great unwashed, thinking in the strict sense can curtail that flow because we precensor. Writing creates ideas and experiences on paper that might never have existed without it. Preediting in order to save time really wastes time. Furthermore, doing an unplanned, improvised first draft is an almost fail-safe apprehension breaker.

2. *Students must have something to say in order to write.* A corollary to #1, this lore may also be exploded. The fact is that ideas often come while writing. We discover what we have to say in the act of saying it. And we get up the courage to write it. As E.M. Forster once asked, How do I know what I think until I see what I say? When we write, we figuratively make ourselves two persons out of one. Once we have written, we, as subject, can review closely what, as object, we have said.
3. *Learning to write precedes writing.* A fixed period of prewriting or planning cannot be distinguished before any writing act. Nor should it. We learn while writing. And for most of us, it is a slowly accruing skill. No one really knows when planning starts. Few of us care. What we care about is capturing ideas before they are censored or forgotten. With the free-write method we may write a lot of junk, but we won't risk throwing the baby out with the bath water.
4. *Simple writing reflects a simple mind.* Nothing could be further from the truth. No one wants to be a considered a simpleton. But practiced writers know that the level of sophistication of the writing is linked to audience, not to them. Nobel Laureate Arno Penzias, responsible for the Big Bang/Black Hole theories, uses esoteric, highly technical language that defies understanding by none other than his peer astrophysicists. Yet, one night years ago I heard him talk on the Dick Cavett show in a language that a sixth grader could understand. Skilled writers are sufficiently versatile to adjust their discourse to match the comprehension levels of their readers. Don't be fooled by this myth. Simple writing can express profoundly complex ideas, as in the disciplinary essays of Hugh Boudeau, John Kenneth Galbraith, Lewis Thomas, and Ernst Mayr.
5. *The writing process is the same for everyone.* Clearly not. We have unique composing styles, cognitive styles, temperaments, and experiences. Students should capitalize on their idiosyncracies. Ask them during what time period do they do their best writing. What location is most conducive to their thinking and writing (desk, kitchen table, bed)? What equipment facilitates their writing (legal pad, computer, felt tip pen, colored paper)? If they write better at 6:00 am, they should do it. If they write best in the evenings, they should do that. If they write best on a park bench, they should go there. If it's a local luncheonette, along with a cup of coffee, they should spend the time there.
6. *Writing is solitary and silent.* Although I admit to doing my best revising serenely alone, I have discovered an interesting tool: Talking my writing to someone. Even if students experience writer's block, they probably don't have talker's block. When I am stuck, I read out loud sometimes the smallest sentence to the department secretary, to my husband, or when all else fails, to myself. And the correct words usually come. What I am trying to say here is: Students should write *not* what they're supposed to say but what they *mean* to say. They should write to be understood, not to impress. If they want to communicate, they need to say exactly, and I mean exactly, what they want to say, no matter what.[13] Gradually they come to say something that they previously ignored because it was too difficult to express.
7. *Writing should be right the first time.* Most of us are lazy. We think that if we take the time to compose sentences in our heads rather than on paper, they will come out perfectly, and we have saved the time and trouble of writing, rewriting, fussing with them. After all, we

fussed with them in our heads. Shouldn't that be enough? It is a lovely wish but for the most part inaccurate. I promise that no matter how hard we work, we will probably never write several consecutive drafts of a sentence without something being awkward or unreadable. What's more, we will probably never be able to dictate more than three consecutive sentences without producing something clumsy or obscure. Decide that our first draft is our last draft, and we will probably never write a creative thought.

8. *Writing is tidy.* I lived this lie when I went to public school. I remember ink wells, thin red margins, the eradicator that bleached my paper and the desk beneath it, and ink erasers that rubbed through almost everything in their way. One draft written in pen; I could never get it perfect. Of course, writing can be neat for some people. But, by and large, early drafts need be no one's but our own--so long as they are readable. Getting the ideas down is the overarching goal of these drafts--no matter how boring, childish, or chaotic they may be. I don't concentrate on prettiness or perfection. I have come to trust my fits and starts. I am confident that the seemingly aimless jottings of my first 17 lines are indeed responsible for the success of, say, line 18. We never know when the silliest idea is responsible for the next brilliant one.
9. *Writing can be generated on demand.* This is partly true. While we cannot expect to create Nobel Prize-worthy literature at the drop of a hat, we can get used to writing all the time. We should take legitimate breaks. But we must earn them. Put another way, we need to give ourselves time to reflect on our material and time for ideas to percolate. If students are worried about what we will think of their work, they should not put themselves in a position of writing an important piece without a chance to revise--a chance to make constructive and clarifying changes. Restricting ourselves to a single draft with no opportunity for change only invites writer's block and mediocre output.
10. *We have to like writing to do it well.* It helps to love what we do. And to do well at what we love. But I write mostly whatever and whenever I need to--even if I do not particularly want to.
11. *Writers are a special breed of people.* Writers come from all socio-economic strata, ethnicities, and educational backgrounds.
12. *Writing should be easy, and its cousin, writing should be efficient, that is, fast and accurate.* Nonsense. Writing is sublimely inefficient for most of us. And it is demanding. Most of us agonize. We write. We rewrite. We move language around, manipulate it, multiply, and divide it. Maya Angelou said it well: Easy reading takes hard writing. Look at Balzac's manuscript of *Eugenie Grandet*, even after it was set in type[14]:



Balzac's Revision of *Eugenie Grandet*

BEST COPY AVAILABLE

13. *To reach the widest audience, writers should stay as general as possible.* I once had a student who, reaching thematically for multiculturalism and global cooperation, used the popular expression "We are the World" several times in an essay. Apart from borrowing the term from Walt Disney, John expected to embrace this highly complex notion in one overworked slogan, when in fact he made an impact on no one--that is, because we saw nothing. We touched nothing. New students of writing do not realize that by trying to say it all, they say nothing. Thus, when in doubt, they should strive for the concrete, particular, the idiosyncratic detail.

■ A Note on Correctness

The traditional writing process identifies these steps: focus on the subject, outline, gather material, write a first draft, and revise.[15] Or, pick a topic, narrow it, gather information, make an outline, write, and proof. In other words, the traditional writing process worked in this order:

correctness,
clarity,
fluency.

Contemporary writing students invert the process. They prewrite, develop, and shape their material, frame a thesis, revise, and outline. Contemporary writing pedagogy thus works in this order:

fluency,
clarity,
correctness.

Detractors claim that the emphasis of contemporary composition pedagogy on making meaning has spelled the demise of surface feature correctness. This is untrue. Writing specialists care deeply about correctness. It is not a question of whether or not to ignore or forego mechanical correctness. Concern in contemporary writing pedagogy is with when diligent correcting is set in motion. Imposed too early in the writing process, attention to mechanical features may debilitate the thinking/meaning process. It is also inefficient because we don't often know at that point if the material that we are fastidiously correcting will survive revision--and, if so, in what form. However, before producing final copies of text, students must apply standards of correctness to their papers. And if surface feature mistakes render a piece unintelligible or distracting, correctness becomes a priority.

■ Contemporary Thought on Language Use

1. Meaning is at the center of all language use.

2. Writing is *not* at the core of the curriculum. Thinking is, and writing makes thinking visible.
3. Difficulties with language impede growth in knowledge and limit understanding.
4. Developing precise language builds analytical and imaginative powers.
5. Passive reception of knowledge through listening, viewing, and reading leads to low retention and minimal understanding.
6. The goal of learning the rules is to render them invisible.[16]

■ The Contemporary Writing Process

1. The writing process is recursive and impalpable.
2. Writing develops over time.
3. Writers work in many ways; categorical imperatives are not helpful: "Outline first" is as destructive as its opposite, "Do not outline first."
4. Writing ability develops quickly when students are motivated.
5. Writing is proactive, leading to higher retention and fuller understanding.
6. Writing is frequent; some is revised; some is evaluated.
7. Students should read first for the essential soundness of the writing; then, if it is sound, writers should look at the surface features.

■ Conventions of Writing in the Disciplines

It is in the very nature of WAC to demonstrate that similarities and differences in disciplinary writing coexist. While the underlying features of all quality writing remains essentially the same (e.g., clarity, conciseness, correctness, and so on), the content, formatting, the rhetorical and discursive conventions vary with the discipline. Patterns of inquiry appropriate to the discipline also vary. Biologists write differently from business persons who write differently from psychologists--what they write about, how they write it, and how it looks on the page. Technical and scientific writing is short, crisp, and cleanly formulaic. Writing in the humanities favors a flair for metaphor and the inventive turn of phrase. In technical and scientific writing the use of *I* is conspicuous by its absence as is the more decorative prose associated with the humanities. In history interpretation is a priority, much less so in computer science. In the new journalism introductions are often personal and anecdotal, not so in laboratory reports. Reviews of the literature are more likely spread throughout critical papers whereas social science research reports generally confine them to a beginning section.

Expectations also differ with disciplines: In the humanities writers analyze and explicate, using text as a jumping off point for demonstrating a felicitous interpretation. In the hard sciences the text is dispassionate and objective. Only at the end of the material are speculations and/or implications allowed. And disciplines have their preferred forms. Engineers might use legal logs, proposals, design notebooks, and reports. Business and corporate communications use management statements, team statements, leadership statements, mission statements. Foresters write such forms as conservation reports and environmental impact statements. Psychologists write intake and clinical reports and case studies. Faculty write recommendations, evaluations, and examinations. Physicists write lab reports, grant proposals, and progress reports. As we know, in English literature the story, letter, and review are typical forms. In other subject areas the laboratory report may be most important. Description and interpretation of graphs or charts are appropriate for engineering and science majors but largely inappropriate for French majors. Contrasting phenomena plus taking a position are used widely in MBA programs and English.[17]

THE WRITTEN PRODUCT

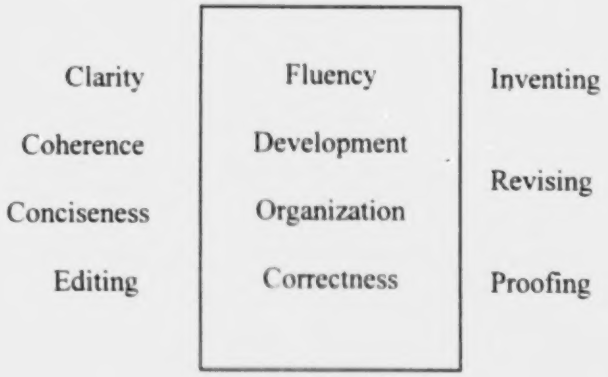
The WAC component of disciplinary courses is designed for majors wishing to sharpen their writing skills acquired in lower-level general writing courses through practice in analyzing, evaluating, and composing prose in their field. Emphases are placed on generating complex written material, revising it closely, and applying critical thinking skills to the processes. The WAC component helps students apply formal research and documentation to the discourse of their discipline. It helps them adapt knowledge in that field to a range of written forms appropriate to it.

■ Components of Writing

We can look at disciplinary discourse in several ways:

1. **Genres/Literary forms**: thriller, report, science fiction, proposal, epic, essay, letter, etc.
2. **Rhetorical**: audience, purpose, invention, ideas and details, arrangement, style, and tone.
3. **Linguistic**: essay, paragraph, sentence, word; syntactic, morphological, phonological, graphological, semantic.
4. **Mechanical/Surface features**: capitalization, punctuation, spelling, layout/formatting.

Diagram of the Writing Process



Features in Order of Importance

Written Product: Static Pattern	Writing Process: Dynamic Pattern
Clarity	Details/Development
Details/Development	Organization
Organization	Clarity
Coherence	Coherence
Conciseness	Conciseness
Style	Style
Correctness	Correctness

The Hows

Most writing specialists prefer to see written products as processes.

- How to report data and events
- How to answer a direct question
- How to summarize information about a given topic
- How to discuss the significance of a person or event
- How to deal with conflicting opinions on a given topic
- How to evaluate data and opinions
- How to define someone else's ideas
- How to determine tone, point of view
- How to define an issue and make a point
- How to compare, contrast, evaluate, relate
- How to argue on paper
- How to do this fast, as in an essay test
- How to do this slowly, revising and polishing as in a paper
- How to quote or cite the work of others and indicate the difference between mine and thine
- How to paraphrase without plagiarizing and without distorting the source

Competencies for Writing Achievement

Writing should not be seen as a study of its own but crossing itself with any and all areas of study. As such, overall writing goals should be fairly standard. But the very variations among disciplines suggest flexible means to arrive at them.[18] Disciplinary writing also reflects departmental practices and national trends. To most of us, good writing

- has meaning: It is filled with accurate, honest information and readers are persuaded

- has meaning: It is filled with accurate, honest information and readers are persuaded through authoritative information;
- is concrete, specific, and vivid;
- accurately reflects the relationships among ideas;
- is economical;
- satisfies the reader's hunger for information;
- has focus, form, order, coherence, and a sense of completeness;
- is marked by a readability appropriate to the audience; and
- has voice, one individual speaking to other individuals--writing is not speech written down but gives that impression.

Distributed democratically across most disciplines, student writing would therefore be expected to

- demonstrate such essential attributes of good writing as clarity, development, organization, proportion, fluency, conciseness, coherence, appropriate style/tone, correct usage/grammar, spelling, and punctuation;
- apply critical thinking (variously defined as problem solving, the strategies of logic and reasoning, reflecting on or questioning assumptions, evidence, conclusions, etc.) to deep or close revision (see Chapter 3 and Appendix Part 2);
- make use of the patterns of paragraph development and other rhetorical techniques learned in lower division writing courses to generate longer, more complex, and more synthetic exposition and argumentative (professional) prose;
- assemble ideas and/or data and move them between a thesis and full blown paper or research report; and
- practice the techniques for doing research (note-taking, quoting, paraphrasing, summarizing, and documenting) and for avoiding plagiarism.

■ Sample Competencies in the Disciplines[19]

Within their disciplines, students would *work with its distinctive forms, styles, and subject matter*. They would be expected to [20]

- draft extended and complex texts on a variety of topics and for a variety of purposes;
- become familiar with the discourse in the designated field by critical reading and the examination of texts in it;
- accommodate their writing style to textual formats appropriate to the discipline;
- practice research methods using resources for research in the designated field; and
- generate a full length research project or a critical/analytical paper.

■ Examples of Disciplinary Writing Tasks

Arts and Performance

Communications: briefs, editorials, TV scripts, essays, fillers, ghost writing, political columns, interviews

Art

1. Formally analyze a work of art
2. Address the historical context out of which it emerged
3. Be aware of major historical movements in art (Classical, Romantic, etc.)

Music

1. Evaluate philosophical/aesthetic views held by musicians
2. Compare them to those held by rival musicians and/or critics

Theater

1. Analyze playscripts and plays-in-production without the help of secondary sources
2. Isolate the theme of a play or production through systematic analysis
3. Recognize the relationship between a play in print and a play in production
4. Explain the extent to which a play in production helped or hindered the realization of a play in print

Letters and Sciences

Earth Sciences/Geology: lab notebooks, articles

1. Identify common rocks, minerals, and fossils
2. Be familiar with modern concepts of:
   petrology
   mineralology
   structural geology
   paleontology
   principles and techniques of field mapping
3. Appreciate the general design and the specific techniques appropriate to investigations in the geological sciences
4. Know the regional geology of the state and nation
5. Appreciate the relevance of geology and the potential role of the geologist with respect to current societal issues, local to global
6. Appreciate geology as an evolving science in which the current ideas should be understood both as the result of the historical development of the discipline and as a prelude to continuing advances, which dictates continuing study

English: critical reviews, essays

1. Explicate/Interpret texts without the aid of secondary sources
2. Take into account relevant historical, biographical, and/or social contexts

Mathematics: explanations, proofs

1. Apply a theorem and illustrate
2. Read, understand, and summarize a mathematical concept in writing
3. Write an expository paper with a clear and identifiable thesis supported by theorems, corollaries, examples, and counter-examples

Psychology: intake reports, diagnoses

Interpret information presented in journal articles to demonstrate an understanding of the statistical presentation, the underlying research design limitations of interpretation (e.g., correlational vs. causal interpretation, generalization, reliability) and the relevance of the research to larger issues in psychology and in society.

Professions

Business: reports, memos, executive highlights, job descriptions, performance evaluations, policy statements
1. Explain economic theories and concepts in prose form
2. Describe the technicalities of economic models and other methodologies used in economics
3. Illustrate the models using graphs and equations

Counselor Education: clinical notes, correspondence

Education
1. Plan a lesson with clear objectives and strategies
2. Curricula, grants, assessments, informational brochures, program planning
3. Critique/Evaluate a lesson

Health Science: standard research, lab reports, IEPs, progress reports, athletic handbooks, injury/accident assessments

Nursing: notes, memos, reports

Social Work: case studies, legal histories/summaries, evaluations, recommendations, agency apparatus, grants

Select Forms for Content Writing[21]

Applications
Annotations
Biographies
Briefs

Marketing plans
Math puzzles and conundrums
Medical records
Memos

Cartoons
Case studies/histories
Charts
Clinical writing
Commentaries
Consumer reports
Cover letters
Critiques
Curricula
Debates
Diagnostic plans
Diagrams
Dialogues
Dictionaries and glossaries
Directions/how-to
Edited journals and diaries
Editorials
Environmental impact reports
Essays
Executive highlights
Experiments
Fact sheets
Feature articles
Field notes
Financial reports
Flowcharts
Histories
Informational monographs
Interviews
Job descriptions
Journal articles
Laboratory reports
Legislative cases
Lesson plans
Letters:
  public/informational
  private/persuasive
Literary analyses
Literary reviews
Literary works:
  poems
  plays
  fiction:
    historical
    science fiction
    fantasy
    romance

Minutes
Narratives
Newspaper/Magazine "fillers"
Nonfiction
Notebooks
Observation reports
Performance appraisal
Policy statements
Political columns
Position papers
Poster/Slide/Film displays
Press releases
Progress reports
Proposals: grant, etc.
Queries
Question-answer columns
Record books
Reports
Research proposals
Research reports
Reviews:
  articles
  books
  films
  plays
  television programs
Scholarly notes
Scripts:
  radio
  films
  television programs
  documentaries
  dialogues
  documentaries
  slide shows
Software documentation
Specifications
Statements
Story problems
Summaries
Surveys
Tables
Teacher evaluations
Technical reports
Telegrams
Texts
User manuals

SAMPLE STUDENT FACT SHEETS

Business Student Data Sheet[22]

Name:
Day Phone:
Address:
Year (Circle one): FR SO JR SR GRAD
Speciality Area in Major (Circle one):

Social Security No:
Evening Phone:
Major:

Finance Accounting Marketing Management International Business

How many credit hours are you taking this semester?
Details on any relevant past employment:
Details on current employment:
Do you have concerns about this course that you would like me to address?
Please read and sign the statement below:

I certify that I have met all the prerequisites for this course. I also certify that I have read the syllabus carefully and am familiar with the requirements for the course. I agree to prepare regularly for and participate actively in this class. I understand that the professor, in turn, will do his or her best to contribute effectively to this class.

Signature:

Student Information Questionnaire

Name: ______________________
Phone Number: Day ____________
Address: ______________________
Evening: ______________________
When is the best time to reach you?
Date you entered Brockport:
Have you taken any college writing courses before? If so, when did you take these writing courses, where did you take them, and who were your teachers?
List the titles (not numbers) of other courses you are taking this semester:
List your hobbies, social activities, and intellectual interests:
If you are working, briefly describe your job:
What are your career goals?
Who is your academic advisor?

Precourse Student Information Sheet

Name: __________________________
Transferred from: __________________
Degrees: __________________________

Circle: Sophomore, Junior, Senior, Graduate
SUNY Brockport Native: ______________
Specialization: ______________________

Career Goal:________________________

List the courses that you have **already** taken in your major at **any** college.

List the courses in your major (including course numbers) that you are **currently** taking.

List the writing courses that you have taken in college.

If you work, what is your current job? How does it relate to your major?

Check off the kinds of writing you **have done** in your major or on the job.

____ abstracts
____ summaries
____ essay tests
____ persuasive papers
____ case studies
____ field reports
____ research proposals
____ literature reviews
____ laboratory reports
____ research papers
____ progress reports
____ evaluations
other_____________

List the kinds of writing in your major that you **anticipate doing** this semester.

List the kinds of writing in your major that you **anticipate doing** in your profession.

Rate the following kinds of writing.

	(Dislike)			(Like)
Creative writing (fiction, poetry)	1	2	3	4
Informal letters	1	2	3	4
Journals, diaries	1	2	3	4
Literary analysis	1	2	3	4
Science papers	1	2	3	4
Analytic papers in pre-professional courses (History, Economics, Psychology, Business, etc.)	1	2	3	4
Research papers	1	2	3	4
Other (please specify) ____________________________	1	2	3	4

Describe the strengths you have in writing--what you do best (e.g., finding ideas and supporting evidence, organizing a paper, starting to write, finding the right words).

Describe the hardest parts of writing for you (in descending order of importance).

Name the two most important things in your writing that you want to improve.

What two good articles or books have you read in your major?

What two readings in your major have you failed to understand?

How far in advance do you usually begin a writing assignment?

Do you make a plan before writing?

If so, is that plan (1) thought out in your head, (2) written down as informal notes, (3) written out as a formal outline, or (4) written another way? Explain.

Do you usually revise your papers?

If so, do you revise as you write or do you write the whole paper and then revise it? Explain.

If you revise, do you revise **most** to (1) clarify your ideas, (2) develop your ideas further, (3) make your writing correct, (4) make your paper neat, or (5) achieve some other goal? Explain.

Do you think your writing has generally been effective? (Rate your writing, 1-6)

Not At All Effective					Very Effective
1	2	3	4	5	6

Take the rest of this page to tell me more about yourself--your interests, anything that you would like to share.

Anthropology Information Sheet[21]

Name (Print): ____
Course: ________________ Semester: __________
ID #: ________________ Year: Fr. Soph. Jr. Sr. Gr.
Major: ________________ Minor: ____________________
Phone #: ________________ Address: ____________________

In what area of [anthropology] are you most interested?
Physical/Biological [ ] Archaeological [ ] Cultural [ ]
Which would you like to do after graduating?
[ ]Attend graduate school in [anthropology] (identify area)____________
[ ]Attend graduate school in____________________________________
[ ]Attend professional school (law, etc.) in__________________________
[ ]Work in a field that directly uses [anthropological] skills such

as____
[ ]Other____

Identify below or on the back any general topics that you might like to explore in preparation for a thesis.

I have received the attached syllabus and am aware of the policies regarding attendance, grades, exams, readings, academic dishonesty, and academic standards.

SIGNED____________________________**DATE**_______________

CHAPTER 2
PREWRITING AND INVENTION

Writing and rewriting are a constant search for what one is saying.
John Updike

The discovery of valid or seemingly valid arguments to render one's cause plausible.
Cicero

The best time for planning a book is while doing the dishes.
Agatha Christie

So anyway....So I wrote five or six pages on nothing, but I included the words "African Nationalism" in there once in a while. I thought, why this is just like high school. I can get away with doing this. I got the paper back, and it was a C minus or a C or something like that. It said "no content." And I was introduced to the world of college writing.
Students think-a-loud protocol, *College English*[1]

One definition of prewriting means the period after we become aware that we are going to write.[2] Or prewriting can mean that millisecond between generating a specific idea and putting that idea down on paper. Or prewriting can mean everything that happens in the mind of writers before an idea is ready for words and the page. Erika Lindemann believes that prewriting and invention are equivalents. Laurence Behrens claims that motivation is the only prewriting worth anything. Be that as it may, invention is really about finding ideas.

Writers need to learn how to explore topics. In rhetoric this activity is known as invention. But this is not, on the face of it, true of upper division courses: The data of the content areas usually do not have to be invented. They are largely there. Facts are facts are facts. But the way they are codified, articulated, arranged, and interpreted varies by field and by the perception of those who are in it. What students need to do is to learn the facts, then learn to work with them (that is, think about them, analyze and synthesize them, interpret them, and then perhaps, but not always, come up with some original ideas).

Categories of Evidence

Students may draw on various categories of evidence when they discover ideas[3]:

1. Direct experience
2. Observation (the senses)
3. Casual and formal reading
4. Conversation or the testimony of authority
5. Recall
6. History
7. Reasoning
8. Legal precedent or policy
9. Definition
10. Conventional/Received wisdom
11. Analogy
12. Imagination

INVENTION METHODS

The methods listed below assume that our minds carry out a process that is both rational and intuitive. Rational methods are subject to two criteria:

1. **Comprehensiveness: The Open** (e.g., Hooker's 14,000 topics based on the Dewey Decimal system) or **Closed Set** (e.g., Burke's Pentad and Tagmemics revealing universal invariants that underlie human experience).[4] Does the invention method account for the basic discriminations of a subject? In other words, does it exhaust the possibilities for it? Or can additional discriminations always be made?
2. **Efficiency:** Is the method designed simply? Does it specify a clear sequence of mental activities? Does it follow a particular direction of inquiry?

The sequence of skills often implies a theory of instruction. Methods of invention are based on heuristics, a type of rhetorical reasoning not regarded as final or strict but only as provisional and plausible. Invention techniques give students permission to be critical but flexible thinkers.

What helps majors in any discipline is the ability to think deeply and widely about a subject. The following list of invention technique provides us with options should we want our students to move beyond the recall of facts, principles, and so on. These invention approaches are handy rebuttals to students who say they have nothing to write about. Moreover, by finding and practicing different ways of inventing, students can literally think different things.

Problem Solving or Structured Planning

In 1983 Anderson and Van Dijk and Kintsch classified any goal-directed behavior (conscious or unconscious) as problem solving. It occurred when a particular goal required certain mental operations and steps. Composition scholar Flower has translated this thinking into discursive terms. As such, these methods are controlled approaches to composing. We set out certain rhetorical or procedural constraints and set goals characterized by an ordered, deliberate strategy.[5] (Initially, we may present a problem since students have a tendency to select problems whose answers they already know or are easy to solve.) Students move from a question to the intuition of potential solutions and enact a method (like the scientific method). Several general problem-solving strategies turn out to be effective invention techniques. For example:

1. Retrieval of relevant information already known
2. Perceived need or difficulty through exploring relevant data
3. Clarification of issues and analysis of problematic data
4. Formulation of questions (heuristic devices) to solve problems
5. Discovery of ordering principles
6. Testing and verification

Tips For Students

1. Get the total picture; don't get lost in detail.
2. Withhold judgment; don't commit yourself too early.
3. Create models to simplify the problem, using words, representations (visual, symbolic; internal (mental pictures), external (drawings), symbols, or equations.
4. Try changing the representation of the problem.
5. State questions verbally, varying the form of the question.
6. Be flexible; question the flexibility of your premises.
7. Try working backwards.
8. Proceed in a way that permits you to return to your partial solutions.
9. Use analogies and metaphors.
10. Talk about the problem.[6]

Tagmemics[7]

We can view anything--concrete or abstract--from three physical perspectives: as a static point/particle, as an entity in process, and as part of a larger field.[8] This model limits the haphazard selection of ideas and does not confine students to a particular mode of discourse. The advantages of this technique is also that it exhausts the basic discriminations of a subject.

	Contrast	Variation	Distribution
Particle	View the unit as an isolated, static entity, point, or dot. How do we label it?	View the unit as a specific variant form of the concept, i.e., as one among a group of instances that illustrates the concept.	View the unit as part of a larger context.
	What are its contrastive features, i.e., the features that differentiate it from similar things and serve to identify it? Are there subpatterns or subcategories?	What is the range of physical variation of the concept, i.e., how can instances vary without becoming something else?	How is it appropriately or typically classified? What is its typical position in a temporal sequence? In space, i.e., in a scene or geographical array? In a system of classes?
Wave	View the unit as a dynamic object or event, a unit in flux. What is its historical setting? What physical features distinguish it from similar objects or events?	An object in flux. View the unit as a dynamic process. What precedes it? What follows it? How is it changing? How much can it change and still be itself? How did it come into being? What entity is it becoming? What can it never become?	View the unit as a part of a larger, dynamic context. How does it interact with and merge into its environment? Are its borders clear cut or indeterminate?
Field	View the unit as an abstract, multidimensional system. Relative to other things in its class, how does it fit into the larger system? What is the function of this larger system? How are the components organized in relation to one another? More specifically, how are they related by class, in class systems, in a temporal sequence, and in space? Are there different varieties of the unit?	A field in flux. View the unit as a multidimensional physical system. How do particular instances of the system vary?	View the unit as an abstract system within a larger system. What is its position in the larger system? What systemic features and components make it a part of the larger system?

Contrast

1. How is the subject different from things similar to it?
2. How has this subject been different for me?
3. What would a snapshot of this subject be?
4. How is this subject made?

Variation

1. How much can this subject change and still be itself?
2. How is it changing?
3. How does the subject change from day to day?
4. What varieties of the subject do I know or have I encountered?
5. What particular experiences do I have that illustrate the kinds of things I know or problems I have in relation to this subject?
6. How do I change in relation to this subject?

Distribution

1. Where and when does this subject take place?
2. What is the larger thing of which this subject is a part?
3. What is the function of the subject in this larger thing?
4. How does this subject fit into my life?
5. What other things (experiences) preceded it? Followed it? Were similar for me?

✍ *Exercise*

These questions may be tailored to any topic. After students have jotted down their ideas on each question--no matter how bizarre--they read through their notes and write a draft based on our instructions.

1. **Physical Detail**[9]
   Students begin by observing a person, object, place, or picture closely. We can show slides of a whole scene, then closeups of specific details. We can prompt students with such questions as: What is its shape? Is it mottled? How does it feel? Smell? Taste? Sound?
2. **Contrast**
   X is not like ___________________because___________.
   X is not like me because________________________.
3. **Comparison**
   X is like (reminds me of)_________________because_________.
   X is like me because_______________________.
   X is as__________________as ____________.
4. **Context**
   X might be found in______________________(time of day, year, century).
   X might be found in______________(place).
   A place I would never expect to find X in is____________.

5. **Change**
   X used to be______________, but now it is____________.
   How has X changed? (appearance, values, social relations, etc.)
   How have you changed your view of X?

Alternate Version

What are the causes of X?
What are the theories of X?
What are the characteristics or symptoms of X?
What are the capacities for and likelihood of change in X?
What are the effects of changes in X?
What are the characteristics of family or social group of X?
What are the similarities and differences in X depending on...?
What is the history of X?

■ The Pentad

A forebear of the journalists' formula (who, what, where, why, when, how), the dramatistic approach developed by Kenneth Burke stresses the developmental and perceptual advantages of analyzing the interaction between the elements that are part of any topic. Burke's Pentad, involving analyzing motives and identification as themes in human experience, produces richer material for writing. For example, what connections existed between a scene such as America of the Sixties and the emergence of a leader like Dr. Martin Luther King? Burke claimed that by mixing and matching such elements, students uncover complexities not apparent in the simple journalistic questions. The pentad may be considered a closed heuristic probe because it also exhausts the basic discriminations of a subject.[10]

1. **Agent**. *Quis Quibus auxilis*? Who did it?
2. **Act**. *Quid?* What was done? Holding a rock, carrying a rock, observing it, possessing it, freeing it, being it.
3. **Scene**. *Quendo*? *Ubi*? When and/or where was it done (setting)? My hand, my pocket, the world of human possessions.
4. **Agency**. *Quanodo*? How did he or she do it? Carrying, feeling, seeing, fantasizing.
5. **Purpose**. *Cur*? Why was it done?

■ The Rhetorical Modes (see Editing/Evaluation Forms, Appendix Part 1)

The modes start ideas flowing in disciplined avenues of inquiry. Psychologist and philosopher Alexander Bain articulated four basic modes of discourse: **e**xposition, **d**escription, **n**arration, and **a**rgument (**EDNA** plus poetry). Narration and description are defined by subject and approach (a spatial or temporal perspective), and exposition and argument are defined by purpose.[11]

Modes of Discourse[12]

	Function	**Subject**	**Organization**	**Language**
Narration	Tell a story, narrate an event	People and events	Space/time	Denotative and connotative, figurative, literal, impressionistic objective
Description (5 senses; show vs. tell)	Evoke sensory experience	Objects or senses	Space/time	As above
Exposition	Inform, instruct, present ideas	Ideas, generalizations	Logical analysis and classification	Denotative and factual
Argument	Convince, persuade, defend, refute	Issues	Deduction and induction	Factual and emotive, depending on appeal

Exposition and argumentation may be broken down into several, more specific modes: analyzing a process, classifying/dividing, defining, finding causes and effects, and comparing and contrasting.[13]

As do many traditional composition classes, upper division content courses often ask students to write modally. Many of us were no doubt exposed to modes as students. However, some contemporary writing practitioners say that studying these modes in isolation is fairly meaningless because, by themselves, some do not actually exist in the real world or are not very challenging.

For example, the most basic mode, the narrative, tells a story. It is usually set chronologically, unless for some special reason, it uses flashbacks or other temporal arrangements. While a most important skill, narration is one that we learn first. Children early on tell one-word stories, three-word stories, two-sentence stories. When students really want to tell a story to someone who really wants to understand it, they can tell remarkably good, detailed narratives. That is why in a sense it is not a very discriminating rhetorical mode because students have had lots of experience with it. As a result, several current rhetorics and readers have moved away from a textbook structure based on the modes toward a developmental sequence of reasoning designed to build critical thinking skills.[14]

That is not to say that professional occasions never call for a narrative section. They may be labeled anecdotes, case studies, field notes, accident reports, presenting problems. A social worker takes a case history. An anthropologist traces a childbearing ritual. A homeless male tells how he came to sleep in the subways. An inmate tells how she dumped drugs.

So, as discrete and pure discursive units, the modes have rare application in the world outside the academy; writing in one mode is impossible without using others. And rightly so. Our minds do process information modally. However, we don't usually identify the modes as such. Instead we will talk about: recommending one blood typing procedure over another; tracing the circulation of lymph; defining optimal wellness; or documenting the process for setting up a spread sheet. Students in a business math course are asked to predict the possible consequences if a company fails to prepare departmental margin statements.

In general then, the modes are good for reminding students that they can apply them in *small* segments in response to thinking/writing tasks. However, particularly significant in the disciplines is describing, classifying, and defining. Because of their unique contribution to founding and shaping disciplines themselves, I address them separately in Chapter 5.

Static and Progressive Paradigms. The modes may be viewed as **static** paradigms. The topics are entities, **fixed** in time and space; the **progressive** paradigms include topics such as narration and process that occur **through** time and space, that is, in several time-states.[15]

Static Subjects

1. **Description Paradigm**
   Paradigm A: Vertical Order (bottom to top, top to bottom)
   Paradigm B: Horizontal Order (left to right, right to left)
   Paradigm C: Depth Order (inside, outside)
   Paradigm D: Circular Order (clockwise, counterclockwise)

2. **Definition Paradigm**
   Extended Definition A
   A. Introduction (includes logical definition)
   B. Expansion of the genus
   C. Expansion of the differentia
   D. Conclusion (includes clincher sentence)

   Extended Definition B
   A. Introduction (includes logical definition)
   B. Supporting details

- C. Supporting details . . .
- D. Conclusion (includes clincher sentence)

Extended Definition C
- A. Introduction (includes thesis)
- B. Meaning 1 (partial definition of key term)
- C. Meaning 2 (partial definition of key term)
- D. Meanings 3, 4, 5, . . .
- E. Conclusion (includes clincher sentence)

3. **Analysis Paradigm**
    - A. Introduction (includes thesis)
    - B. Characteristic 1
    - C. Characteristic 2
    - D. Characteristics 3, 4, 5, . . .
    - E. Conclusion (includes clincher sentence)

4. **Enumeration Paradigm**
    - A. Introduction (includes thesis)
    - B. First (the first, one)
    - C. Second (the next, two)
    - D. Third (another, three)
    - E. Finally (the final, four)
    - F. Conclusion (summary)

5. **Classification Paradigm**
    - A. Introduction (includes thesis)
    - B. Type 1 (or subclass 1)
    - C. Type 2 (or subclass 2)
    - D. Types 3, 4, 5, . . .
    - E. Conclusion (includes clincher sentence)

6. **Exemplification Paradigm**
    - A. Introduction (includes thesis)
    - B. Example 1 (or cluster of examples)
    - C. Example 2 (or cluster of examples)
    - D. Examples 3, 4, 5, . . .
    - E. Conclusion (includes clincher sentence)

7. **Comparison Paradigms**
    Half and Half Pattern
        - A. Introduction (includes thesis; sets up comparison)

- B. Subject 1
    - i. Characteristic 1
    - ii. Characteristic 2 . . .
- C. Subject 2
    - i. Characteristic 1
    - ii. Characteristic 2 . . .
- D. Conclusion (includes clincher sentence)

Characteristics Pattern

- A. Introduction (includes thesis; sets up comparison)
- B. Characteristic 1 . . .
    - i. Subject 1
    - ii. Subject 2
- C. Characteristic 2 . . .
    - i. Subject 1
    - ii. Subject 2
- D. Conclusion (includes clincher sentence)

Point by Point Pattern

- A. Introduction (includes thesis, sets up comparison)
- B. Subject 1 is similar (dissimilar) to Subject 2 in this respect
- C. Subject 1 is similar (dissimilar) to Subject 2 in this respect
- D. Conclusion (therefore, subject 1 is similar [dissimilar] to subject 2 in some respect, or known about 1 but not about 2)

Progressive Subjects[16]

1. **Narration Paradigm**
    - A. Introduction (setting, character)
    - B. Event or Incident 1
    - C. Events or Incidents 2, 3, 4, . . .
    - D. Conclusion

2. **Process Paradigm**
    - A. Introduction (organizing sentence, description of the materials, principles, implements)
    - B. Step or Phase 1
    - C. Steps or Phases 2, 3, 4, . . .
    - D. Conclusion (includes clincher sentence, summary)

3. **Cause and Effect Paradigms**

Cause to Effect Pattern A

A. Introduction (includes background material, thesis)
B. Cause 1
C. Causes 2, 3, 4, . . .
D. Effect
E. Conclusion (includes clincher sentence)

Cause to Effect Pattern B

A. Introduction (includes background material, thesis)
B. Cause
C. Effect 1
D. Effects 2, 3, 4, . . .
E. Conclusion (includes clincher sentence)

Effect to Cause Pattern A

A. Introduction (includes thesis)
B. Effect 1
C. Effects 2, 3, 4, . . .
D. Cause
E. Conclusion (includes clincher sentence)

Effect to Cause Pattern B

A. Introduction (includes thesis)
B. Effect
C. Cause 1
D. Causes 2, 3, 4, . . .
E. Conclusion (includes clincher sentence)

Twenty Questions for Writers[17]

Mode of Development	Corresponding Question
Information	What are the facts about X?
Summary	How can X be summarized?
Definition	What does X mean?
Functional Definition	What is my understanding of X?
Simple Analysis	What are the component parts of X?
Process Analysis	How is X made or done?
Directional Analysis	How should X be made or done?
Causal Analysis	What are the causes of X?
Causal Analysis	What are the consequences of X?
Classification	What are the types of X?
Comparison	How does X compare to Y?

Comparison	What is the present status of X?
Interpretation	How should X be interpreted?
Critical Evaluation	What is the value of X?
Argumentation	What case can be made for or against X?
Description	How can X be described?
Narration	How did X happen?
Characterization	What kind of person is X?
Reminiscence	What is my memory of X?
Response	What is the essential function of X?

✍ ***Exercise***

Name the rhetorical mode most effective in explaining these ideas or extending those explanations to readers[18]:

1. Flexible work-week.
2. Blind date.
3. Staff organization.
4. Systems engineer.
5. Mediation represents a definite advance over arbitration in labor disputes.
6. A cardinal principle of professional writing is adaptation to the reader.
7. Information System Services offers technology geared to up-and-coming organizations.
8. Living on a budget is good training for any prospective professional.
9. One of Frank Lloyd Wright's architectural innovations was the "curtain wall" construction, characteristic of so many newer office buildings.

■ Neo-Classical Invention

Ancient rhetoricians devised two major forms of discourse: the dialectic, which aims for truth in a balanced argument; and rhetoric, which persuades and thus argues for one side or another in an unbalanced argument (e.g., classical ballet is out-dated; the cafeteria needs improvement; most people are conformists). Classical invention focuses on finding arguments likely to produce psychological changes in the audience. How it happens depends on the rhetorical situation, i.e., the audience, purpose, various constraints on the writer, and subject.

Appeals. Writers draw on three available means of persuasion or *appeals*:

Ethos--appeals based on moral character
Pathos--appeals to the audience's emotions
Logos--appeals based on logic (informal fallacies, formal syllogisms)

Although all three may be appropriated in any one piece of prose, much disciplinary writing is handled by logical appeal. Logical arguments may be developed by definition, comparison, contrast, antecedents, consequents, or contradictions--all in all, invoking reason and evidence.

Topoi. With this tool, students rely on common or special topics to which they can turn to ask questions. The questions involve recurring themes in human experience, all based on logical/emotional/ethical appeals. This is a lengthy process and largely unmanageable in the real world. But if it helps students respond, we can tailor these questions to specific assignments. Here are examples of *some* questions students can ask themselves[19]:

1. **Physical Objects**
   A. What are the physical characteristics of the object?
   B. What sort of structure does it have?
   C. What other object is it similar to?
   D. How does it differ from things that resemble it?
   E. Who and what produced it?
   F. Who uses it? Why?
2. **Events**
   A. Exactly what happened?
   B. What were its consequences?
   C. How was the event like or unlike similar events?
   D. To what other events was it connected?
   E. How might the event have been changed or avoided?
3. **Abstract Concepts** (e.g., democracy, justice)
   A. How has the term been defined by others?
   B. How do you define the term?
   C. What other concepts have been associated with it?
   D. In what ways has this concept affected the lives of people?
   E. How might the concept be changed to work better?
4. **Collections of Items**
   A. What exactly do the items have in common?
   B. If they have features in common, how do they differ?
   C. How are the items related to each other?
   D. How may the groups be divided? On what basis?
5. **Groups of Completed Events, Including Processes** (literary works)
   A. What have the events in common?
   B. If they have features in common, how do they differ?
   C. How are the events related to each other?
   D. What is revealed by the events when taken as a group?
   E. Into what class do the events fit?
6. **Propositions** (statements to be proved or disproved)
   A. What must be established before the reader will believe it?
   B. What are the meanings of key words in the proposition?
   C. By what kinds of evidence or argument can the proposition be proved or disproved?
   D. What counter arguments must be confronted and refuted?
   E. What are the practical consequences of the proposition?

7. **Questions** (interrogative sentences)
    - A. Does the question refer to past, present, or future time?
    - B. What does the question assume (take for granted)?
    - C. In what data might answers be sought?
    - D. Why does the question arise?
    - E. What fundamentally is in doubt? How can it be tested? Evaluated?

Questions Checklist[20]

1. Put to other uses
    - A. New ways to use as is?
    - B. Other uses if modified?
2. Adapt
    - A. What else is like this?
    - B. What other idea does this suggest?
    - C. Does the past offer a parallel?
    - D. What could I copy?
    - E. What could I emulate?
3. Modify
    - A. New twist?
    - B. Change meaning, color, motion, sound, odor, form, shape? Other changes?
4. Magnify
    - A. What to add?
    - B. More time? Greater frequency?
    - C. Stronger? Higher? Longer? Thicker?
    - D. Extra value? Plus ingredient?
    - E. Duplicate? Multiply? Exaggerate?
5. Minify
    - A. What to subtract?
    - B. Smaller? Condensed? Miniature? Lower? Shorter? Lighter?
    - C. Omit? Streamline? Split up? Understate?
6. Substitute
    - A. Who else instead? What else instead?
    - B. Other ingredients? Other material? Process? Power? Place? Approach? Tone of voice?
7. Rearrange
    - A. Interchange components? Another pattern? Another layout? Another sequence? Transpose cause and effect?
    - B. Change pace? Change schedule?
    - C. Reverse?
    - D. Transpose positive and negative?
    - E. How about opposites? Turn it backward? Upside down? Reverse roles? Change shoes? Turn tables? Turn the other cheek?
8. Combine
    - A. How about a blend? An alloy? An assortment? An ensemble?
    - B. Combine units? Purposes? Appeals? Ideas?

■ TRIPSQA

We have wonderful minds with considerable natural skill in figuring things out. Writing itself is a heuristic for discovery. It enacts patterns of thinking that readers expect. We learn that answers go with questions, solutions go with problems, consequences go with causes. This invention technique capitalizes on that premise. It asks students to use these terms to prompt a sequential inquiry.

Topic, **R**estriction, **I**llustration, **P**roblem, **S**olution, **Q**uestion, **A**nswer

■ Talk-Write[21]

Associated with Robert Zoellner, the rationale behind better writing may not necessarily be preceded by better thought. Because most students have a greater fluency in speaking than in writing, speaking can be used as a stage before writing and provide the basis for moving through increasingly sophisticated thought processes. Talk is a rapid way to explore ideas, sharpen personal perceptions, stimulate the imagination, arouse the emotions, and provide practice in expressing ideas. Put simply, the talk-write approach capitalizes on the fact that students are significantly better at talking than at writing simply because life situations dictate that they have more practice at it. Writing should improve talking, and talking should improve writing.

Cognitive psychologist Vygotsky stated that talking is a first order skill and writing is a second order skill. In a free utterance, the talk-write approach assumes that there is somehow something inside students that they want, first vocally and then scribally, to let out. Like the depth psychologies, the underlying cause is invisible and inaccessible, like awkward, jumbled, opaque, and ineffective thought.[22] Unlike depth psychology in which insight leads to new action, vocal activity leads to new insights.

It is a behavioral approach to inventing. Autonomic and motor responses are integrated at both the emotional and problem-solving levels. Every effort is made to develop and strengthen the functional connection between the scribal-motoric and the vocal-motoric areas of the verbal system.[23] The assumption is that there is an intermodal transfer from one behavioral area to another, a rapid alternation between verbal and scribal mode. The written voice takes on some of the characteristics of the speaking voice and vice versa. Clients in psychotherapy sometimes ask: Why do I have to say something out loud? Why can't I just think it? To which the answer is: Feeling is only half of it. Saying it, getting it into your muscles, is the other half.[24]

Pedagogical exploitation of the vocal repertory is particularly useful with apprehensive writing students. With this approach students say the very thing they were unable to write. They participate in a sound stream, a vocal to scribal dialogue, getting socio-vocal and/or scribal reinforcement at appropriate moments. In fact, we may initially write students' actual words as they speak.

■ Freewriting

In any event, it is the activity of the mind that develops ideas, plans, designs--not merely the entrance of an idea into the mind. While some scholars work problems out in their heads, others will at the oddest times scribble notes on napkins, envelopes, scratch pads, or the edge of a newspaper. Freewriting seems to happen by trial and error, or it may occur as a linear, rational process with meaningful trials. Either way, by definition freewriting as prewriting is not aimless or haphazard. In this method, we do not try to prevent learners from making errors. On the contrary, we exploit them.

As I noted earlier, the writing process is apt to be inverted or cyclical in structure. Writing moves from the conceptual level to editing. The first aim for students is thus fluency. Freewriting is an invention technique in which students start with a subject and, without planning or consciously thinking, write anything on the topic that comes into their mind. The free associative, intuitive method, also called *expressive writing* or *focused freewriting*, takes the form of letters, journal entries, logs, notebooks, daybooks, field notes, think books, commonplace books, working papers, and so on. The writing itself is a way of coming to know. In contrast to classical invention that emphasizes discovery of the available means of persuasion in any rhetorical situation,[25] freewriting minimizes attention to audience and makes self-actualization primary.

We may use expressive writing to

- help students to record rapid-fire, unedited ideas (see also Appendix Part 3 on informal writing)[26];
- start discussion/warm up;
- summarize;
- solve problems;
- rehearse for tests;
- respond to readings;
- generate paper topics;
- generate material for formal papers;
- evaluate progress;
- set priorities;
- record growth;
- question;
- focus (nutshelling); and
- study.

✍ *Exercises*

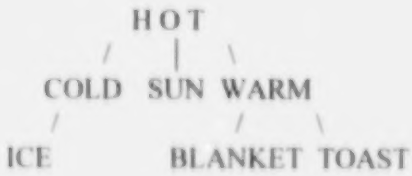
1. Focused Freewrite
    - A. Do a standard freewrite.
    - B. Circle key words.
    - C. Do four quick writes on that word or phrase. It now becomes a focused freewrite.
    - D. Summarize the main points in each focused freewrite.
    - E. Type them on summary slips of paper, which become an index of all ideas in each focused freewrite.
    - F. List, point by point.
    - G. Juggle around until they make sense.
2. Looping
    - A. Begin with a specific topic.
    - B. Write nonstop for X number of minutes.
    - C. Make no changes or corrections.
    - D. Write a center of gravity sentence for each loop (a sentence describing the main thing you have been discussing in the loop) before going to the next loop.
3. Logs
    - A. Write short logs in class. (As instructors, we only skim them.)
    - B. At the end of the semester insert page numbers, a title for each entry, a table of contents, and evaluative conclusion. (We do not grade but count pages.)
4. The Journal Book[27]
    - A. Reread freewrites and circle usable items.
    - B. Reread and circle different items and make those kernels for papers.
    - C. Use the book as a stimulus for detail.
    - D. Free associate a tree diagram.
    - E. Make a list of the main points. Does a useful pattern emerge?
    - F. Express a thesis of the freewrites, an assertion.
    - G. Consider the five senses.
    - H. Apply the reporter's formula to the material.
    - I. Read it to a friend. Jot down the questions he or she asks.
    - J. Examine word choice. What does it tell you?
    - K. Are any words overused that detract from the writing?
    - L. What are the key words?
    - M. Read the material aloud to yourself. What does it call to mind?
    - N. Put the freewriting aside for a few days. When you return to it, imagine it was written by someone else. Critique it.
    - O. Write again on same subject. Do you have a new perspective?
5. Writing Process Notebook for Students
    - A. What have you learned in writing this draft?
    - B. What strategies did you use in writing this draft?

C. Have any of your readings influenced this draft?
D. What revisions have you made?
E. Where is it stated? Summarize the main idea of your piece.
F. What kind of feedback did you receive? How helpful was it?
G. What is the best part of your material?
H. What problems did you have in writing this draft? Did you solve them? How?
I. Which part of your piece needs more work? Why?
J. What questions do you still have about this draft?
K. Have your ideas about this topic changed as a result of your writing?
L. How is this paper different from others you have written this semester?

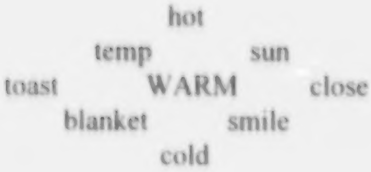
■ Brainstorming

Every invention technique in some way rests on brainstorming, the data available to writers at any given moment. Brainstorming is an abbreviated freewriting technique in which key words are free associated in a list or another form. Brainstorming gets students' ideas flowing. It gets students talking, thinking, generating ideas freely *before* giving a related writing assignment. The **DOVE** rule is empowered here: **D**efer judgment; **O**riginality (strive for the unique); **V**astness (quantity); **E**laborate (ideas build, piggyback/ hitchhike on another). The popular forms are branching (e.g., the Darwinian evolutionary tree), clustering, or cubing.

Branching



Clustering



Cubing

Cubing is a technique for swiftly considering a subject from six points of view.
Rules for Cubing:

1. Use all 6 sides of the cube. (Describe it, compare it, associate it, analyze it, apply it, argue for or against it.)
2. Move fast (no more than 3-5 minutes on each side of the cube).
3. Switch quickly.

■ Analogy

Using "like" or "as" essentially changes the vocabulary vis a vis the topic and thus students' ideas.

Direct analogy. The topic is compared to something concrete, e.g., an erector set builds meaning; Saturday is a blank piece of paper; the elasticity of the universe.

Symbolic analogy. The topic is compared to an abstract principle or concept, e.g., a ring is love; a circle is perfection.

Fantasy analogy. Anything goes, e.g., it's like walking right inside the writer's head and getting him or her to answer your questions.

NOTES ON FLUENCY AND WRITING ANXIETY

Voltaire soaked his feet in ice water while writing; Proust stuffed his desk with rotten apples; Hemingway stood up, keeping a typewriter nearby; Balzac tied himself with a chain to the leg of his desk. Not pretty pictures, to say the least, but these authors aren't the only ones plagued with writing anxiety. Many people are adrift, paralyzed from useful writing by the difficulty in starting writing and maintaining fluency.

Part of the purpose of this guide is to raise our awareness of the composing processes so that we can help students write effectively. That's all well and good when they are fluent. But how do we do that if a student can barely write at all? Suppose he or she can't even get words down on the page. The objective of this section is to help students break through the apprehension barrier.

Dispel the illusion that writing in class is a panacea. Not everyone develops skills in a single semester or even a year. Moreover, writing instruction cannot be forced on resistant individuals. Some students will always play soccer better than they write.[28]

Ask students: How many have experienced the painfulness of procrastination when it comes to writing? The fear of the blank page? Some old ideas about writing may be in part responsible. Like the myths exploded in Chapter 1, this section is intended to dispel that thinking, to demystify the writing process.

Tips for Students Plagued with Apprehension

1. Get ideas down on paper, so you can use them. The procedure is simple. Just think about your subject and write down every idea that comes into your head:
    - A. Don't throw out any ideas, even if they sound silly.
    - B. Don't try to rank your ideas or evaluate their importance.
    - C. Don't worry about introductions or conclusions. Those can be written later.
    - D. Write down ideas without regard to correct grammar, spelling, punctuation.
    - E. Strive for quantity, the more ideas the better.
    - F. Don't worry about repetitions.
    - G Don't worry if you start writing about something else. You can always bring yourself back, and you can always edit something out later.
    - H. The worst is over now. You have some stuff on paper that you can work with: add, cut, organize, in a word, improve.
2. Give yourself permission to make mistakes. We all have difficulty writing because we are afraid of failure. Our eyes are too much on the impression it makes on our superior. Liberate yourself from your mother, your professor, your most critical peer.
3. You don't have to be a Hemingway to become a critical reader and maintain sentence logic. Most people sit down and want to commit an act of literature, make a fancy entrance. After a while they become themselves and throw away the first lines. Be reassured. If you can speak, you can write. It's scary when you sit at a desk, dressed for the occasion, hair combed, with a perfectly anointed desk, sharpened pencils, and blank paper or screen. Don't do it. Never go to your desk with an empty pad or paper or without notes. Write when you're not thinking about writing. Keep pad and pencils nearby to receive that writing. Anything more than a *the* is a good beginning.
4. If you are still having difficulty making yourself clear, start your explanation with **WIRMTSI**: **W**hat **I R**eally **M**ean **T**o **S**ay **I**s . . . and continue talking the explanation, and the rest of the ideas inevitably follows.
5. Think **K I S S: K**eep **I**t **S**imple **S**tupid/**S**weetheart.
6. Sometimes I use a temporary crutch to help get me going. Starters or leads (Dear....; accident report [On September 30, a blue vehicle...]) become the scaffolding, a diving board, so to speak, from which to generate text--which I remove later.
7. When you are having trouble describing what you want to write, try a summary statement. Imagine someone asking: Just give me your idea in a nutshell.
8. Capitalize on your idiosyncracies: Write at your favorite time (morning or night), at your favorite location (desk, office, home, attic, etc.), with your favorite equipment (computer, #2 pencils).
9. If you find your mind drifting when you sit down to write, move to another place. When you want to do something (make a phone call) that is unrelated to writing, go somewhere else to do it.
10. If you are having a hard time doing any writing, start with only 15 minutes of solid work time, then gradually increase it.

11. Reward yourself. Don't take a break to dodge your work. Take a legitimate break to pat yourself on the back and for ideas to incubate.
12. Don't be too hard on yourself: Don't set unrealistic goals or extraordinary expectations for yourself (a book in a month; an article in a week). Then, you may ask, how does writing get done? You lower your standards and move on. Or, as Rutgers statistician Doug Penfield once said, a page a day is a book a year.

To summarize:

First, composing should be quick and dirty.
Then, editing should be slow and careful.
Try not to edit and compose at the same time.

CHAPTER 3
DRAFTING AND REVISING

I have nothing to say, but a great deal to add.
Gore Vidal

Writing and rewriting are a constant search for what one is saying.
John Updike

All writing is revision.
Donald Murray

Revision means seeing again. In writing, it is defined as making changes to discourse. According to writer and teacher Donald Murray, internal revision happens whenever we think about writing or rewriting. External revision is affected by peers, the self, the teacher, and the audience. In either case, while draft work may well be responsible for the insights that emerge as students compose, not all draft work *should* remain as they approach a final paper. Students are generally attached to every syllable they write. As do professionals, they should learn to throw away--or save for another occasion.

It may be difficult to distinguish revision from other writing processes such as correcting (eliminating mechanical errors and stylistic infelicities), revising (shifting larger segments of material), rewriting (completely redoing a piece or beginning anew), or reformulating which seems to include everything.[1] In fact, revision may only be three different but profoundly related activities, substantive (meaning-bearing) revising, editing, and proofreading. In any event, revision occurs during any one of the following processes:

1. Invention/Development: generating a full first draft
2. Arrangement: putting the pieces of the discourse in order
3. Style: attending to words, phrases, and voice
4. Conventions: conforming to standard English

Or at any level of review:

1. Zero draft: generating a piece to work on
2. Problem-solving draft: revising
3. Editing draft: polishing
4. Proofreading draft: checking conventions

Revision may be done under any circumstances: at home or in class, as individuals, in pairs, in triads, or in the whole group. It may be done on originals, copies, overheads, or computers.

■ Assumptions[2]

1. Revising is considered a series of strategies that attend to developing and problematic aspects of a text and end in satisfactory rhetorical adjustments.
2. As is drafting, revising is a generative process.
3. Revision can be taught and learned. Careful planning and allowing for time are as important, if not more important, for teaching revising than teaching prewriting and writing.
4. Modeling is important in teaching revision, just as it is in the initial stages of teaching writing. Students need to know what constitutes effective written processes, so they can begin to know how to make theirs good.
5. To sustain interest in revising over several drafts, the piece of writing should be important to students.
6. There are individual differences in the way writers work: There are thus equivalent differences in the way students revise. Some writers do not allow a secretary/assistant to make corrections on their manuscripts lest it prevent them from insights that seem to occur every time they read through their piece.

■ Taxonomies of Revision[3]

1. By syntactic unit: word, sentence, paragraph, section, paper
2. By linguistic unit: graphic, lexical, phrasal, clausal, sentence, paragraph, thesis, theme
3. By formal surface changes: spelling, tense, number and modality, abbreviation, punctuation, format
4. By textual changes: microstructure changes, macrostructure changes that preserve meaning or alter it, additions, deletions, substitutions, permutations, distributions, consolidations
5. By purpose:
    - A. Functional: meets demands of the assignment
    - B. Structural: deals with the order, arrangement, architecture of the writing
    - C. Personal growth: develops confidence, self-knowledge, self-esteem
    - D. Dialogic: probes meaning

General Revising Directions for Students[4]

Now that the rough draft has been returned to you, and you are prepared to revise, consider how best to do it. In most cases, it materializes as an error hunt, usually surface ones. Central to your concerns should be: conceptual, organizational, and editorial revision. Consider the following points as you revise in the order in which they are listed (in descending order of importance):

1. What is your purpose? What is the most important thing you are saying in this draft? What main question does this draft try to answer? Is there any point you have made that deserves to be central?
2. Are there ideas you need to add, alter, or omit? What haven't you said yet that you really need to say?
3. Do you need to make any large changes in the paper's overall arrangement?
4. Who is your audience? List the things your readers are likely to know about your topic. List the things your readers probably don't know but will need to know in order to understand your paper. How did you decide what your audience did or did not know? How do you want readers to think or act? What will likely be the most interesting or significant part to your readers?
5. How aware do you need to be of mechanics, surface features?

General Self-Editing Guide[5]

Start with:

Describing: Goals/topic and audience; logical and rhetorical strategies (supporting material); characteristics of audience (knowledge, beliefs, needs, etc.)

1. What are you trying to say or show in this section?
2. What are you trying to do in this section?
3. What are some specific characteristics of your audience?
4. What are you trying to get your audience to do or think?
5. How would you describe your organization or type of writing?
6. How would you describe your own role or orientation?

Judging: Sufficiency, relevancy, specificity of support. What are some problems you perceive in achieving 1, 2, and 4 above?

Selecting: What are some changes you can make to deal with these problems?

DETAILS AND DEVELOPMENT

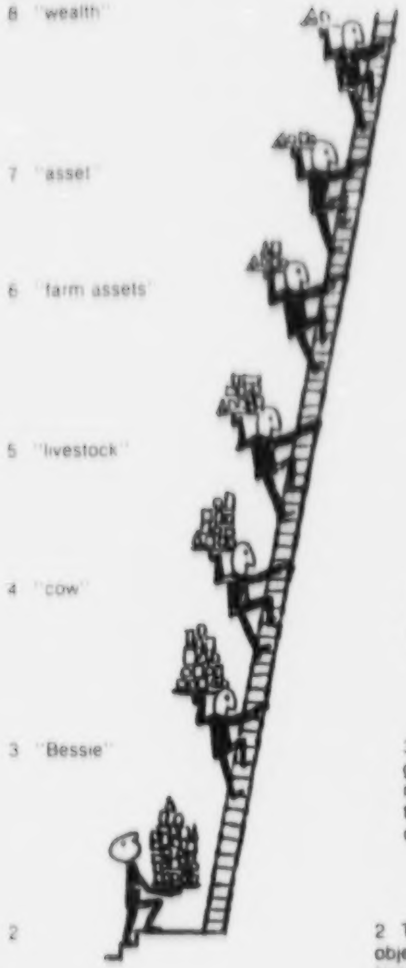
Empty, hollow summary statements are undoubtedly the most common problem in students' papers. Abstractions are lazy, the easy way out. We generally need to revise them, keeping in mind an appropriate level of specificity. And that decision is in turn based on the discipline and the audience. We need to ask ourselves just how specific and concrete we want our students to be. To start we might ask them which is more detailed: Growing tea because of climatic conditions; growing tea because it is cold? Have students also read, for example, Gay Talese's essay "New York" in *The New York Times,* in which he notes at least 30 concrete details in his description of New York that people seldom notice. Students might say: animals, birds, tall buildings. Talese wrote: "stone lions, pigeons, the cats and the gargoyles, Chrysler Building, twin towers of World Trade Center."

Or take a look at this cartoon talk:

I have a pet at home.
What kind of pet?
It is a dog.
What kind of dog?
It is a St. Bernard.
Grown up or a puppy?
It is full grown.
What color is it?
It is brown and white.
Why didn't you say you had a full-grown, brown and white
St. Bernard as a pet in the first place?
Why doesn't anybody understand me?

■ The Cash Cow

S.I. Hayakawa's Abstraction Ladder of Bessie the Cow[6] is a classic way to understand levels of detail. To make sense of levels of specificity, students should start reading from the bottom up, moving inductively from the concrete and specific to the abstract and general. (see next page)



8. The word "wealth" is at an extremely high level of abstraction, omitting *almost* all reference to the characteristics of Bessie

7. When Bessie is referred to as an "asset," still more of her characteristics are left out

6. When Bessie is included among "farm assets," reference is made only to what she has in common with all other salable items on the farm

5. When Bessie is referred to as "livestock," only those characteristics she has in common with pigs, chickens, goats, etc., are referred to

4. The word "cow" stands for the characteristics we have abstracted as common to cow_1, cow_2, cow_3 . . . cow_n. Characteristics peculiar to specific cows are left out

3. The word "Bessie" (cow_1) is the *name* we give to the object of perception of level 2. The name *is not* the object; it merely *stands for* the object and omits reference to many of the characteristics of the object

2. The cow we perceive is not the word, but the object of experience, that which our nervous system abstracts (selects) from the totality that constitutes the process-cow. Many of the characteristics of the process-cow are left out

1. The cow ultimately consists of atoms, electrons, etc., according to present-day scientific inference. Characteristics (represented by circles) are infinite at this level and ever-changing. This is the *process level*

Abstraction Ladder of Bessie the Cow

Examples[7]

First Draft: A veterinarian must be ready to handle any kind of animal.
Revision: A veterinarian must be ready to handle everything from a cat's torn ear to a mare in breech birth.

First Draft: My symptoms included feelings of despair, sleeplessness, the inability to study, the loss of self-esteem, and the complete absence of anything positive.
Revision: Although I had previously been a good student, now I was unable to study, sometimes staring at textbooks for hours without being able to absorb the simplest material. I could count on one hand the number of hours I'd slept in three days. I'd worn the same tan shirt and jeans and the same pained expression on my face for three weeks. And for three weeks I had walked around campus in a daze, becoming more and more estranged from the people around me.

✍ *Exercises*

1. We might bring in short, effective, and ineffective written passages from disciplinary sources. Duplicate good student papers and analyze them with students so they can see why they are good. Model the revision of a paragraph on an overhead or a networked computer, like the example below[8]:

   > He was an unpleasant person--and not what I would call an honest person with anyone. His family didn't seem to care for him, and I didn't like to look at him much. He wasn't very handsome. As a boss he left a great deal to be desired. He defied the laws of good business in dealing with his customers. It's hard to see why they returned, except that he allowed them to charge things, and they lived beyond their means.

2. Guide students through several drafts of the passage, emphasizing the generative and provisional nature of the process.
3. Bring in successive revisions of our own work or that of luminaries in the field, showing the incremental nature of a maturing passage.
4. Have students pull out each major idea in a first draft of a short paper or report and write a complete explanation of each. They then show an example for each explanation. Students decide on a logical and effective order for these major ideas. Last, they rewrite the essay incorporating the ideas and their expansions.[9]
5. Analyzing a revision. The following model shows baseline sentences on line B. Lines A and C are optional word units that students may choose from.

A. putting together of words to create thought.
B. Composition, in writing, is the
C. expression of organized thought.

A. making
B. The word *composition* may refer either to the process of a piece of
C. creating

A.
B. writing or refer to the piece itself. The process of composing involves gathering
C.

A. to express a point of view on
B. information and opinions a subject.
C. and arranging about

A. A finished composition is an expression of some aspect of a writer's personality.
B.
C. The author develops and presents these ideas in sentences and paragraphs that

A. help
B. Preparing a composition can
C. form a well-organized and unified whole. teach

A. more clearly a subject than you can by talking about one.
B. you to think about It
C. carefully what you are going to write.

A. can also help to present so
B. you your thoughts
C. helps organize and present them in a manner

A. them.
B. that others can understand The ability to write clearly and effectively is
C. easily.

A. The ability is valued
B. important to success in school and in many types of jobs.
C. This article discusses

A. because it is an aid to sound thinking.
B.
C. the preparation of a composition as a school assignment.

THE THESIS STATEMENT

Any paper should be capable of being summed up in a sentence. That sentence becomes its organizing principle. A thesis statement is a concise statement that synthesizes information into a single coherent concept. It is usually a defensible assertion, one that makes a reasonable claim on readers' beliefs. And it can be argued. A thesis commits writers to argue one point, clarify one subject, discuss one issue.

Students generally do not know how to set limits for their writing. It seems as if they don't have enough material, or they have too much and believe they should say everything there is to say--starting with the dawn of humankind. They may oversimplify because they are unable to cope with the complexity of the material. They may feel they must arrive at a thesis before they can write anything or even before they can investigate the issue when, in fact, an educated guess is all they need. A thesis establishes a boundary around a subject that discourages students from wandering aimlessly.

Effective thesis statements are neither highly general nor highly specific but somewhere in between. They are a relative concept controlled by any number of variables but principally by the scope/breadth and depth of the topic as well as by the time frame and maximum page length that we set.

Thesis statements should be neither too wishy-washy (T.V. is what people make it.) nor too extravagant (Television is one of the most destructive forces in society today.). A good thesis takes into account alternative claims to truth and differences of opinion.

Thesis statements may be stated at the beginning (the deductive approach) or the end of a paper (the inductive approach). Thesis statements may be implied. The more complex the ideas, the greater the necessity to state the thesis directly and place it in the initial position of a paragraph or paper. It helps readers read more efficiently.

Formulating a statement of purpose early in the writing initially gives a paper shape. Starting with "The purpose of this paper..." announces what students propose to do. However, it is not a substitute for a thesis and, except for highly complex or technical papers, is often appropriately eliminated in the final draft.

Thesis statements should[10]

- define or limit/focus the issue;
- be one declarative (simple or complex) sentence, not a question;
- be concise and straightforward;
- be positive;

- suggest but not necessarily state writers' attitudes toward the subject;
- present opposing views, thus establishing a context for the argument or issue; and
- use *I* judiciously.

For example, in the statement "Watching television is *mentally* unhealthy for the *average* person," the words in italics limit what students intend to discuss. They will be concerned with normal people and will only address psychological phenomena.

In response to the exam question "Discuss the concept of love in D.H. Lawrence's novel *Women in Love*," one thesis stated: This essay will discuss bisexual, homosexual, and familial love in Lawrence's *Women in Love*. Another stated: An examination of bisexual, homosexual, and familial love in *Women in Love* reveals the hatred and the isolation that are present even in the closest love relationships. We can talk about what distinguishes the two and which is the more effective thesis.

■ The Thesis Statement as a Complex Sentence

A thesis statement composed of a complex sentence enables students to concede an opposing view while emphasizing their claim. A complex sentence combines two shorter, complete sentences with a subordinating conjunction (while, because, when, although, etc.) between the two or at the beginning of the statement. The part of the statement without the subordinating conjunction is called the **independent clause**. It can stand alone. The part of the statement with it is called the **dependent clause**. That clause cannot stand alone but depends on the independent clause to complete the thought.

By placing the subordinating conjunction before one of the two clauses, and placing that clause first, students concede that point of view but weight the thesis statement in favor of the second, independent clause. It also assures readers that students will be addressing both sides of an issue, though perhaps not equally. A subordinating clause is thus useful for making minor points quietly.

Examples

Because American society has in *recent decades* become increasingly youth-oriented, the *elderly* have been neglected.

The key word, *because*, indicates that the writer is going to trace the reasons for the problem. The term, *recent decades*, limits the chronological development. *Elderly* indicates a specific segment of the entire population.

Although television producers argue that TV violence has *no adverse* effects on viewers, many *psychologists* assert that television has a *detrimental* effect on children.

The word, *although,* introduces the subordinate clause and points to the alternative viewpoint that the writer concedes. While the thesis statement takes no direct stand on the issue, the position and syntax of the clauses suggest the author's position. Look what happens when the clauses are reversed:

Although many psychologists assert that television has a detrimental effect on children, television producers argue that violence on television has no adverse effects on viewers.

Now, the writer favors television producers. Clues to writers' biases are found not only in a subordinating clause structure but also in their word choice, level of formality, sentence structure (the position of critical language, adjectives), and the amount of text devoted to alternative sides of the issue.

Look at my attempts to come up with a thesis for a scholarly work using the subordinating conjunction *if* and ending up not needing it:

1. The central claim of this book is that *if* a psychology of writing is to be complete, it should include an account of subjective experience.
2. The central claim of this book is that to be complete, a psychology of writing should include an account of subjective experience.
3. The central claim of this book is that no psychology of writing is complete without an account of subjective experience.
4. A realistic psychology of writing is not complete until it factors in the affective component.
5. A realistic psychology of writing is incomplete until it factors in the affective component.
6. A realistic psychology of writing must include the affective component.

■ Tips for Students

1. For a short-cut students should ask themselves: What is the point I am trying to put across? If students can answer this question in one succinct statement, they have found their thesis.
2. Another way to put it: Your topic is "where you go" to look for your thesis, and your thesis is "what you do when you get there" (to make sense of that place).[11]
3. A good test for a workable thesis is the extent to which students can plug in another key term.

The *electoral college* should be abolished.
The *graduated income tax* should be abolished.
Chemotherapy should be abolished.

Delimiting Topics in Social Psychology

Development
A. childhood
B. adolescence
C. adulthood
D. aging
E. kinship

Social Group
A. conformity
B. attitudes
C. leadership

Social Role
A. impression
B. cultural influence
  i. moral reasoning
  ii. emotions

Example of Delimiting a Thesis[12]

Field	Much Too Broad	Still Too Broad	Too Broad	Controlling Question
Psychology	Autism	Description of autistic children	Symptoms of autistic children and emotionally disturbed children	What are the major theories explaining autism? How well do the symptoms fit the theories?
Sociology	Autism	The role of autistic children in society	Autistic children in different societies	Why or why not are autistic children found in all social classes and in all societies?
Political Science	Autism	Autistic children in U.S.	Laws about the schooling of autistic children	What impact on local school budgets has the required education of autistic children had?
Education	Autism	The education of autistic children	The behavior of autistic children in the classroom	What do the characteristic emotional and cognitive symptoms require in remedial teaching?

✍ *Exercises*

1. Discuss why each of these thesis statements on the elderly is flawed.
   A. In American society everything is geared toward being young.
   B. Elderly people are not nor ever will be useless.
   C. As we grow older, we should repay people for the deeds they have done for us.
   D. There may be instances where the elderly people of America are taken for granted, but on the average there has been an increasing effort to make the life of the elderly more convenient.

E. The elderly in this country are forced to live the remainder of their lives with a feeling of purposelessness.
F. Because American society has become increasingly youth-oriented in recent years, the elderly have been neglected.

2. Discuss why these thesis statements on television are flawed.
A. Televison is one of the most destructive forces in society today.
B. Television has a healthy standpoint on most of the American public.
C. T.V. is what people make it.
D. Is television unhealthy? Yes, it is.
E. T.V. is an unhealthy influence upon its viewers, specifically the younger audience.
F. Television viewing is unhealthy because it tends to disillusion the viewer. More and more studies today are finding evidence that the viewer most affected is the child.
G. Can television be compared to a disease which slowly affects the intellect of a person; one whose mind slowly rots away until television rules his or her life?
H. I will examine the positive aspects of television because I think television is healthy and can be beneficial to its audience.
I. Excessive exposure to television can be detrimental to a person both physically and psychologically.
J. Technology is a true blessing to our society; only if it is mishandled can it be termed otherwise. Technology, if not abused, is a true blessing.
K. My feeling toward television is, although it might show some great techniques in learning, it can be quite addictive.
L. Even though television offers enjoyable entertainment to people of all ages in our society, it is also very detrimental to the health of those who continually watch it.
M. While excessive viewing of junk programs on television may stultify the average person, exposure to educational programming can have a very beneficial effect.

ORGANIZATION

Organization satisfies readers' needs for order and the completeness of ideas. Ordering written discourse helps present material at its most readable. It is a primary means by which readers follow a writer's train of thought. Organization provides structure, sequence, and coherence to writing. It is a writer's tool for keeping things moving but under control. It assures readers that one step flows smoothly to the next without omitting anything important. It enables students to emphasize key points by placing them in positions of greatest emphasis. Analyzing and arranging material also make larger and more difficult subjects more manageable to write and easier to understand. The more complex and lengthy the material, the more necessary an effective arrangement is.

The function of a generic format, plan, or outline is that it guides students' work on paper. It acts as a bridge between content and structure. It helps impose order on what might be otherwise ideas arranged in helter-skelter fashion. It can summarize progress and motivate writing projects. Too narrow an outline or plan ignores the interrelationships among elements of the paper. Too broad an outline is unable to guide the development of ideas. However, while organization may be rendered invisible in some disciplinary material, good writing still maintains a discernible, internal logic.

Some organizational patterns are dictated by convention. Traditionally, paragraphs change when a change occurs in speaker, person, idea, or time (SPIT) (see p. 64). The fact that all writing has a beginning, a middle, and an end already makes it an arrangement. Organization provides proportion to those segments. Beginnings and endings vary with disciplines. Beginnings and endings in feature writing in the department of communication read very differently from those of a laboratory report. When specific instructions are unavailable, students can safely reserve 10-15% of text for an opening, 75% for the body or muscle of the work, and 10-15% for the ending. (Traditional academic discourse is known to valorize the tacked-on types of beginning and ending, deadly in most mature scholarship.)

In general, when organizing material, students should generally first classify or group their information. Then they should select the organizing principle that best suits their data, their reader, and their objective. The more complex and lengthy the material, the more necessary is a restatement of generalizations in the middle of the paper and at the end.[13] However, there is often a difference between the most productive order of composing and the organization of a final product.[14] Instructors should avoid tampering with students' composing styles so long as it results in competent products.

There are many organizational patterns, with considerable overlap. It is perfectly acceptable, if not encouraged, to use more than one method of development in the same piece of writing.

■ Simple Enumeration (Listing)

This method may be used with almost any kind of time period or sequence. It is effective when students have several points to make, allowing other organizational patterns to be embedded in the list.

Example

> The basic fire insurance policy is nearly identical in every state. The standard fire policy contains 1) an insuring clause, 2) stipulations and conditions that govern both your basic insurance contact and the extensions and endorsements, and 3) an attachment that describes the property being insured.

Examples or Instances (Anecdotes, Hypothetical Illustrations)

Using examples or illustrations shows readers what students are talking about. This method is also often combined with other methods. For example, a definition is often easier to understand if writers use examples of what a "deductible" looks like. Even the internal order of the example can be important.

Examples

One of the major mistakes in choosing an employee is to hire the person without a clear knowledge beforehand of exactly what you want the person to do. For example, students should answer such questions as these before hiring anyone: If you are running a retail store, will a salesperson also do stockkeeping or bookkeeping? In a restaurant will a waiter or waitress also perform some of the duties of a host or hostess? Answers to these kinds of questions are necessary to prevent misunderstandings.

Any effort to isolate personality traits faces the primary problem of definition. For example, honesty has different meanings for different people. Some people receiving a dime too much at the grocery would return it, but the same people receiving a dime too much from a vending machine might keep it and suffer no feelings of dishonesty. The meaning of honesty depends on individual definition.

Sequences

Chronological. These arrangements report a key idea, series of events, or phenomenon as they occur over time, over space, or in order of importance.

1. **Process Analyses**. A process analysis is a description of how something is done: how blood pressure is taken; how verbs are conjugated; how the age of trees is determined; how the Nelson-Denny Reading Test is administered. This pattern is both a version of the chronological pattern and its own particular mode.
2. **Cause and Effect (Before and After)**. This method is a valuable one because causes and effects can unify a paragraph through the logic of their relationship.

Example

The causes of small business failures are well documented. Poor management appears to be the most common cause. Lack of management experience, unbalanced management experience, and incompetent management far outstrip other business failure causes such as lack of technical ability, fraud, or disasters.

■ Comparison and Contrast

This organization pattern shows the similarities and/or differences between two or more things. It's particularly effective when students are considering alternative ideas or various features of some idea or thing.

Example

Besides general business conditions, other factors over which the owners have no control affect individual firms. Examples of these are the relocations of highways, sudden changes in style, the replacement of existing products by new products, and local labor conditions. Although these factors may cause some businesses to fail, they may represent opportunities for others. One local marketplace may decline in importance, but at the same time new shopping centers are developing. Sudden changes in style or the replacement of existing products may mean trouble to certain businesses but open doors for new ones. Adverse employment situations in some areas may be offset by favorable situations in others. Ingenuity in taking advantage of changing consumer desires and technological improvements will always be rewarded.

■ Spatiality

This arrangement details information from front to back, top to bottom, center out, and so on.

■ Classification (Dividing or Grouping Material) (see Chapter 5)

This order places information top down by parts or bottom up by parts. It partitions or groups similar ideas or items. Conversely, it separates out dissimilar ones.

■ Definition (see Chapter 5)

Example

Many insurance contacts use deductibles. The deductible may be a percentage of the loss or a specified dollar amount. In some contracts the deductible is a waiting period. In others, the deductible is subtracted from the loss settlement that would otherwise be payable or from the value of the insured property. Each policy must be checked to determine what kind of deductible it has.

■ Psychological Validity

When particular action is desired, writers may follow a pattern to induce cooperation. Writers attract attention, motivate readers, instill conviction, and stimulate action--in that order. Marketing strategists work on such principles.

■ Familiarity (from Personal to Public)

A case of an inductive organization, this plan appeals first to the subjective and personal and moves to the more objective and larger, unknown or even hostile matters. A quintessential example of organizing by familiarity, Jerome Bruner's spiral curriculum advocates teaching from what students already know to what they don't know. Here new information is chained from old information.

■ Acceptability

This arrangement is similar to ordering by familiarity in the sense that to be familiar with something is often to accept per se that thing regardless of its merit. When some information is less likely than others to be acceptable, it is effective to move from the most acceptable to the least acceptable. Agreement on initial points hopefully reduces objections to later points. Rogerian rhetoric is based on this thinking.

■ Utility

This method organizes material from the most to the least relevant or useful or vice versa. In every document there is some information that takes precedence over other information, either to make understanding easier or to accommodate readers.

■ Symmetry

Symmetrical order maintains consistency of material and formats in order to make easier comparisons to other written material in the same series.

■ Parallel Structure

This arrangement is a special case of the symmetrical organization noted above. When we compare two or more things, consistency requires that the components receive parallel grammatical treatment.

Thus if a present procedure is examined for nouns like ease of control, effective performance, and cost, any procedure with which it is compared should be examined for the same features that have been written, in the same order, and with the same syntax. This would apply to such arrangements as before and after, cause and effect, question and answer, and problem and solution.

- **Generalization** (general to specific or specific to general, deductive or inductive, respectively).

To use this method deductively, students start with their topic sentence (their most general statement) and then write sentences that become increasingly specific--instead of writing sentences that are approximately the same order of generalization. The development of the paragraph draws the reader more deeply into the subject. Inverting the order, students begin inductively with one or more instances and move on to the larger context of that phenomena and its implications.

Example

> Before undertaking any new business venture, you should consider several things about the state of the economy. What are the general business conditions? What are the business conditions in the city and neighborhood where you are planning to locate? What are the current conditions in the line of business you're planning?

- **Importance or Reverse Priority**

All things being equal, the most important item should come last because it is most memorable; the next most important item should come first because it acts as a hook; and the rest is placed in some judicious order in the middle of the prose.

- **Investigative or Analytical**

This arrangement defines an issue and then peels back its layers to analyze it.

- **Argumentative**

This arrangement establishes and supports a position through a logical series of points and proofs. Like the other patterns, this arrangement is still subject to intra-paragraph organizational options.

■ Corporate

General Approach

- Opening:
  - Introduce the Subject
  - Provide Background Information
  - Mention Authorization
  - Provide a Reminder
  - Draw Conclusion and/or Make Recommendations
  - State an Action or Decision
- Middle or Body:
  - Develop the Subject
  - Explain the Situation
  - Provide the Details
- Ending:
  - Close Tactfully
  - Request an Action
  - State a Decision
  - Make a Recommendation
  - Draw a Conclusion

The Direct/Good News Approach

When we get good news, what do we want first--the good news or the details behind the good news? If someone writes to say that we have landed the job or have been awarded the contract, the first thing we really want to know is that we have the job or the contract. We'll be delighted to read the fine print later. So when we have something good to say, we should say it first. After readers are pleasantly moved by the big news, then we provide the details. Dates, prices, explanations, analyses--whatever is needed--become the second part of our message.

Outline

- State the Good News First
- Explain; Develop; Detail
- Elaborate on the Action
- Close Courteously

Indirect or Bad News Approach

Bad news material requires a different strategy. Because it is negative, we should delay the bad news a bit and open with some kind of buffer statement. These statements should not be empty, meaningless phrases, but genuine attempts to express regret or seek common ground. If we write, "We share your concern about this problem," we should mean it. After the buffer statement, we need to provide the details and analysis to support the bad news that is coming. After the analysis is complete, we state the bad news, hoping to persuade readers that the bad news was unavoidable. At the same time we should want to retain good will. To do this our analysis should be detailed and persuasive and precede the bad news. Then, if we can, we should present an alternative. We should always end tactfully.

Outline

Buffer Statement
Explanation and/or Details
Bad News
Alternative
Friendly Close

Example

Bad News Statement:	A complete refund of your money does not seem justified.
Offer an Alternative:	We would be glad, however, to discuss a partial refund with you.
Closing:	Thank you for drawing this problem to our attention.

Bad News Statement:	We are obliged to withdraw your name from the list of eligible bidders on job 4786.
Offer an Alternative:	We will be able to extend your credit 30 days.
Closing:	We look forward to working with you again.

COHERENCE

Coherence is the elemental glue that makes ideas stick by virtue of their meaning. For example, no transitional words or connectives are necessary here:

Boy meets girl.
Boy and girl fall in love.
Boy and girl get married.

Sure, if we specified, **first**, boy meets girl; **then**, boy and girl fall in love; and **finally**, boy and girl marry, the connectives would punctuate the sequence and eliminate any confusion readers might have. But the connectives are unnecessary. The meaning sticks together for reasons deeper than the connectives that precede each statement, and the sense of the sentences is unmistakable.

However, especially as material gets more complicated, connectives are an important part of professional writing.

■ Locating Paragraph Breaks

Paragraphing has everything to do with organizing prose. An easy way to determine if a new paragraph is necessary is to test for **SPIT**. New paragraphs are typically necessary when there is a change in **S**ubject, **P**erson, **I**dea, or **T**ime. However, other reasons may prompt a break. When several aspects of a subtopic need analyzing, the material gets too dense without paragraph breaks. Too few paragraphs indicate that basic shifts in topics have not been accounted for. Too few paragraphs are also more difficult for readers. They need the relief of the white space that comes with paragraph breaks. On the other hand, when the material for the subtopic is uneven (some material is dense; other material is lean), it may be appropriate to combine the lean material into one paragraph, providing students recognize that an entire paper filled with two-sentence paragraphs is a signal that something is wrong in developing detail or evidence.

Transitions Between Paragraphs. Once we have identified paragraph breaks, there are several ways to achieve smooth transitions between them:

1. Use a **pronoun** that refers to a person or an idea just mentioned in the preceding paragraph (he, she, such, that, these, they, them, this, those, it).

   - As everyone knows, not one of *these* was ever proved.
   - The *four-car accident* occurred last Monday. *It* blocked traffic for hours.

2. Refer to a **central idea** in the previous paragraph.

   Only by *such drastic methods* can we hope to reduce crime in the cities.

3. Invoke **rhetorical repetition** or selective redundancy.

   The human being is but a reed, true. He is a thinking, feeling reed.

   Or, Martin Luther King's famous speech:
   I have a dream. I have a dream that.... I have a dream that....

4. Use **transitional terms** or connectives.

> This new communications satellite may be the way to bring all peoples together. However, ...

Unlike the boy-meets-girl example above, connectives are an important part of academic writing, particularly as the material gets complicated. There are three general kinds of connectives or transitional terms: *coordinating conjunctions, subordinating conjunctions,* and *relative adverbs*, or more plainly, *connectives* or *transitional words*. All, in one way or another, refine or make apparent relationships between or among ideas. (Actually, students do not confuse the terms so much as the punctuation that goes with them.)

Coordinating Conjunctions. Compound sentences are formed by combining simple sentences of related thoughts. The words, clauses, sentences on either side of these terms are considered at parity or equal in status with one another. These sentences take a *comma* before the coordinating conjunction and the beginning of the second independent clause. There are seven main coordinating conjunctions:

For, And, Nor, But, Or, Yet, So **(FANBOYS)**

Example

> The war in the Pacific was infamously ended by the explosion of the atom bomb, *and* the war in the Atlantic was gloriously terminated on D-Day.

Subordinating Conjunctions. Complex sentences are most often generated by introducing a subordinating conjunction before one of two independent clauses. This creates one dependent clause. These sentences take a *comma* only when the natural order of the sentence is inverted, that is, the dependent clause is in the first position in the complex sentence (Although I was hungry, I did not eat.)-- not the other way around (I did not eat although I was hungry.). The dependent clause (Although I was hungry) which is accompanied by the subordinating conjunction (Although) does not usually make a complete sentence without the independent clause (I did not eat.). There are a number of subordinating conjunctions:

after
although
as
as if
as long as
as soon as
because
before
if
inasmuch as
in order that
provided
since
so that
than
unless
until
when
whenever
where
whereas
while

Connectives or Transitional Terms, technically called **conjunctive** and **relative adverbs**. These terms bring ideas into relation or underscore a particular line of reasoning. Unlike coordinating and subordinating conjunctions, these terms do *not* combine clauses into sentences. They are thus *not* used with a comma *between the clauses*. Rather, they take a period. However, depending on the position of the term, a comma may be used before and after the connective (for example: *I am hungry. However, I cannot eat.* Or: *I am hungry. I, however, cannot eat.*).

accordingly
also
as a result
besides
however
in addition
moreover
nevertheless
nonetheless
now
otherwise
so
therefore
thus

Showing Connections[15]

Support or Amplify	(and), also, too, besides, as well, in addition, moreover, furthermore, likewise, similarly, in effect, what's more, again, in the same way, as well as
Give Examples or Evidence	in particular, for instance, for example, in other words, specifically, as an example, to illustrate, such as, to wit, particularly, in point, first, second, etc.
Arrange in Order of Time, Space, Logic, or Importance	first, next, then, finally, meanwhile, later, afterwards, eventually, nearly, above, below, in front, beyond, to the right, to the left, soon, thereafter, sometime, at the same time, subsequently, presently, beyond this, at this point, eventually, gradually, when
Mark the Place	in the distance, close by, near at hand, far away, above, below, to the right, on the other side, opposite, to the west, next door
Show Cause and Effect	therefore, accordingly, hence, thus, thereupon, consequently, as a result, (because), (for), (so), for this reason
Concede or Contrast	on the one hand/on the other hand, (whereas), (but), however, nevertheless, still, and yet, or, even so, (although), unlike, in spite of, on the contrary, at least, rather, nonetheless, instead, (while)
Emphasize	it is true, indeed, of course, certainly, to be sure, obviously, without doubt, evidently, clearly, understandably, in fact, as a matter of fact, moreover, surely, clearly, naturally, evidently, as indicated earlier, above all, especially, most important

Find Exception with or Limitation of, Qualify	for the most part, by and large, with few exceptions, mainly, in most cases, sometimes, of course, (though), to be sure
Summarize or Restate	in other words, to put it another way, in brief, in simpler terms, on the whole, in fact, in a word, to sum up, in short, in conclusion, in summary, to conclude, in general, final, all in all

The charts below show supporting ideas as they are ordered into paragraphs. Several similar items treated superficially may be grouped into one paragraph. By the same token, an item more fully elaborated may need three paragraphs to do it justice. Notice too the emphases at the beginning and end of the outline.

Thesis statement: TV is bad

Physical	heart → death
	weight
	muscles
	ears eyes
Intellectual/Academic	content homework
Social	family friends larger public

Cultural	commercialism materialism
	stereotypes
Moral/Ethical	language
	sex
	substance abuse
	violence
	violence
	violence → death

Thesis statement: TV is bad

Moral/Ethical

sex

sex

language

substance
abuse

Physical

ears
eyes

muscles
weight
heart

Social

family
friends

Cultural

stereotypes

materialism

materialism

Intellectual

content

Moral/Ethical

violence

violence

violence

Exercises

1. Project a piece of writing from a PC or an overhead. Revealing one line at a time, we ask students what they expect for the next sentence.[16]
2. Rather than outline before students write, ask students and a peer to outline after they write. As they establish an order for their material, ask students why they have chosen such an arrangement. This helps check for the sequence of ideas, the balance among ideas, and the unity of the piece.
3. Complete each thought:
   - A. Most students are in college in order to get good jobs when they get out. For example,
   - B. Most students are in college in order to get good jobs when they get out. However,
   - C. Most students are in college in order to get good jobs when they get out. Furthermore,
   - D. Most students are in college in order to get good jobs when they get out. Therefore,
   - E. Lewis Thomas asserts that music "may be the best (language) we have for

explaining what we are like to others in space, with least ambiguity." For example,

F. Lewis Thomas asserts that music "may be the best (language) we have for explaining what we are like to others in space, with least ambiguity." However,

G. Lewis Thomas asserts that music "may be the best (language) we have for explaining what we are like to others in space, with least ambiguity." Furthermore,

H. Lewis Thomas asserts that music "may be the best (language) we have for explaining what we are like to others in space, with least ambiguity." Therefore,

4. Add a connective. Use a different one for each sentence.

A. Most people are opposed to killing. Hunting is a popular sport.

B. The medical committee approved the new procedure. Dr. Tyler disagreed with them.

C. Many residents are still without power. Progress is being made.

D. The telephone provides a quick and easy means of communication. Some people prefer to write letters.

E. There are advantages to choosing a college close to home. You can go home for Christmas without too much trouble.

F. Eating fewer animal products can lower cholesterol levels. Regular exercise improves one's overall health.

5. Design an assignment based on organizing facts:

Assume that you have been engaged by the United Postage Meter Company to make a series of case studies of United Postage Meter installations of various types and sizes. With this purpose in mind, you have gone to Brewster, Massachusetts, to visit the Lawson Hardware Company, which installed a United Postage Meter Model H in April of last year. You have come away with these notes, which you are asked to arrange in a logical and coherent form.

A. Meter resulted in 25% decrease in amount of postage used, as compared with previous year.

B. Before installation, there was no check on stamps taken by employees for personal use; accounting difficult and inaccurate.

C. Postage meter does away with loose stamps.

D. Company mails 100 to 150 pieces daily.

E. 1,000 to 5,000 pieces mailed regularly at end of month.

F. Handling of mail not previously centralized; each department handled own mail.

G. Since installation, central mail person handles all mail himself or herself; means savings in time for other employees.

H. Machine saves at least two hours' time in getting out big end-of-month mailing, which used to cause confusion and delay, upset office routine.
I. Postage cost before installation was $10,400 annually.
J. Many employees had access to stamps; that fact is no longer true.
K. Postage meter makes accounting of postage easy and accurate.
L. 60 employees on Lawson payroll.

Postal Meter

Background:

60 employees
100 to 150 pieces daily
1,000 to 5,000 monthly

Whole-Whole Method

Before:

--decentralized
--saves time
--upsets office routine

--access to loose stamps
--cost: $10,400 annually

After:

--centralized
--saves time
--manageable office
routine

--does away with loose
stamps
--cost: $2,600 decrease

Item-by-Item Method

Before: --decentralized

After: --centralized

Before: --wastes time

After: --saves time

Before: --upsets office routine

After: --manageable office routine

Before: --loose stamps

After: --does away with them

6. Meaning Indicators. Place each of the following phrases in one of the three columns below, according to whether it is a reason indicator, a conclusion indicator, or neither a reason nor a conclusion indicator. For each word or phrase, assume that it appears

before a statement. Then is the statement that follows it a reason, a conclusion, or neither?

	Reason	Conclusion	Neither
implies that			
as shown by			
since			
because			
hey			
especially			
accordingly			
I conclude			
thus			
I think that			
demonstrates that			
being that			
for			
therefore			
four			
proves that			
seeing that			
but			
so			
consequently			
it follows that			
and			
while			
follows from			
nevertheless			
yet			
not			
may be deduced from			

DEEP REVISION

Students do not often know what to expect when they read over their writing. They may believe that if their piece is grammatically correct, they are finished. Nothing could be further from the truth. Deep revision refers to the careful and close critical rethinking and rewriting of intermediary drafts of written discourse. Deep revision means line-editing. Students inspect their material word-for-word for clarity, coherence, conciseness, consistency, completeness, courtesy, and correctness. It is our responsibility at the upper division to insist on students making careful sense.

In deep revision everything is up for scrutiny. Deep revision forces students to think critically. It requires not only logical thinking but also connotative thinking. Students must put themselves in the heads of readers and ask what they take a passage to mean.

When serious lapses in logic recur, it is a good time to work on deep revision. There are several options. We may set aside fifteen class minutes to work on the particularly egregious problem. Another option is to revise deeply on an overhead the first few paragraphs of a report or paper. Working a paragraph of a paper individually in conference is yet another approach. Then we can require students to complete the task on their own. Still another alternative is to compile problem sentences from students' earlier papers, from short to longer passages ordered by difficulty. I prepare the material double-spaced and duplicate it so students can make corrections directly on the paper. I also make overlays to work from at the front of the room or I have them projected from our computers.

Because students tend to clean up the easiest problems first, we work on bald, obvious surface errors. Use the whole class because, among them all, there's a greater chance of someone spotting and correcting the error. I ask what is wrong with this sentence? Students identify it. I make corrections on the overhead or computer. They make them on their papers or electronic copies.

I gradually introduce larger portions of prose with increasingly clumsy, complex, and subtle textual confusions. At about the same time I assign students to groups of four and five, then to groups of three.[17] (Even if students do not correct all statements, they practice identifying the awkward or logically impossible in the writings of others.)

As students get familiar with this procedure, students work in dyads, exchanging papers and revising deeply. We may start this process in class but have students complete it out of class. The point is, weaning them from us, students ultimately act as their own editors, learning to write and read closely on their own. The most important thing to remember is to work with meaning-bearing subject matter because we are teaching the thought processes involved in the discourse of the discipline and the training of the critical habit of mind.

Examples of Statements Needing Deep Revision

1. Violators will be immobilized or towed at owner's expense.

   Sign at Parking Garage, St. Louis, MO

2. His grandfather, a metal worker, sailed from Holland in 1835 and settled in Evansville, Indiana, but often floated down the Mississippi to New Orleans selling his metalwares, then walked back on the Natchez trace.

   Park Dedication to Francis A. Mesker, St. Louis at the Mississippi River

3. These actions were the result of satisfying certain needs, such as thirst, illness or boredom.
   This sentence contains lapses in logic, parallel structure, and idiomatic language. We can satisfy thirst. But we cannot satisfy illness or boredom. The idiom does not distribute democratically across all three nouns. One revision might read:
   These actions were the result of satisfying thirst, of curing illness, and of reducing boredom.

4. Despite hurricane Gilbert in Mexico, they were glad to be back in Rochester.
   ABC News
   What is wrong here is that the word, despite, is incorrect. It was not in spite of the hurricane that people traveled back home; it was due to it. Revised it might read:
   Because of hurricane Gilbert in Mexico, they were glad to be back.

5. Instead of the impromptu essay, freewriting, discussion, draft writing, and peer response are conducted.
   The problem here is a technical one. Because continuous commas separate the list of class activities equally, readers do not know where to separate what is being replaced by what. Revised, it might read:
   Instead of merely completing the impromptu essay, students participate in freewriting, discussion, draft writing, and peer response.

6. For students whose command of English is limited because their native language is not English....
   This statement is awkward and circular. Revised, it might read:
   For students for whom English is a second language....

✍ ***Exercises***

1. By observing him studying, it seems as though he is rather fidgety.
2. While preparing for school, such comments were made as, "I hate school," "I don't want to go to class," and "I'm such a waste."
3. When she did talk, it was either to ask a question or in reaction to what her friend said.
4. For women, the hoped and strived for goal is that of perfection, especially in the area of physical attributes.
5. The comment was not reacted on by the remaining members of the room.
6. Two fifteen-minute sections were in observance of Terry chatting with our suitemate, Doug.
7. By proceeding to manipulate meaning and stressing its importance, the child learns all aspects of language according to importance.

8. The list of self-demeaning comments goes on and were usually pertaining to bodily characteristics, but spanned to many degrees of her life.
9. I observed:
   A. his relation with his new roommates.
   B. how much time he spent in my room.
   C. how much time he spent in his own room.
   D. how he adjusted to his new environment.
10. My subject of observation was Jack. I have been observing Jack in three, fifteen-minute intervals for a week. I have observed him in his work setting, which is carpentry. He is doing the final stages of our home.
11. Some individuals see Ritalin as a sign of help; however, it may be beneficial to some children by working with them through positive reinforcement or rewards.
12. Agenda setting is a communications theory which refers to the idea that the mass media tell society which issues are important through the amount of time and attention they dedicate to them.
13. The final principles involve working with clients toward symbolizing their current experience and stating intentions based on needs or wants. The latter two principles serve to promote the creation of new meaning and the provision of a sense of direction for action in the world.
14. It is probably commonplace for most persons to change their behavior as they ascent from a one on one conversation to a multi-party social setting. I believe the personality transformation is likely to be one which exhibits some of the less desirable traits of a person. By less desirable I specifically mean outbursts of degradation and callousness.
15. Today there are many options one may choose when trying to enjoy himself. A great number of people choose to play sports as their form of recreation. In other words, people engage in physical activity for pleasure. The word sports can create a variety of mental images. In my opinion, I see sports falling into two categories: recreational and professional.
16. By talking whether or not she's answered, Meg appears to have little interest in her studies, or at least her textbooks, yet it may be possible to take her actions so far as to suggest that she has a low attention span. This may be hypothesized from observing the way she watched television, paying only a few minutes attention at a time and talking about topics which are irrelevant.
17. Whole language students begin with whole real literature and move on to parts-phonics, spelling, punctuation, and grammar. They read and write primarily for meaning and then study the mechanics in the context of what they've read and written. A large part of the responsibility for learning has been shifted to students. To motivate students and give meaning to what they learn teachers become facilitators instead of lecturers. They join with students in reading and writing activities, rather than direct them. The emphasis is on the message in whole language. The mechanics come at the editing stage, and the students do a lot of self correcting for spelling, punctuation, and grammar. Perhaps the most common procedure used in whole language classes is that of journal writing....

Examples of Weak Student Writing[18]

Culture of Yellow Perch in Recirculated Systems in the Laboratory

Judy Burz has picked the yellow perch for her studies basically because there is not a whole lot of work that has been done with these type of fish. The work that has been done is split in differences, so there are no forcertains in this field. She started by purchasing 50 yellow perch at the end of november and splitting them into two groups. One group she feed them a 30% protein food and the other group she feed a 50% protein food. Furterly, these two groups were split into two more groups That were feed either continously or twice a day. So far she has found that the group that was feed the 50% protein has grown well and has almost reached there normal length and weight. The group feed the 30% protein have not grown and show cannibolism. The filtration set up seemed to be rather be a rather basic one but does require maintenance. She said that the whole project did require a fair amount of time as in measuring the O_2 in the water, the length of the fish, and maintaince of the whole works. The results of differences between feeding continuously and twice a day have yet been obtained and probably wont till the end of the project. In all she said the project has run smoothly but the hard part is yet to come which is the final paper.

MEMORANDUM

TO: Stanley Ross, Executive -Vice President
FROM: Cramer Conners, Administrative Assistant
DATE: October 23, 1989
SUBJECT: Recommending a New Implementation a Plan

EXECUTIVE SUMMARY

A short term objective and a long term objective was achieved in order to gain entry into an existing cell separation market. Short term goal was to produce a substitute product for the whole blood separation market with the intended date of launch being April 1986. Long term objective was to use cash flow from sale of product to launch other related product lines, in order to assume a market leader position by dominating new niches in the market.

Problem encountered was improper implentation of business plan leading to unsure quality of products.

To solve this problem, there was a recommendation to review corporate strategy in correlation with company's manufactured methods, research and development procedures, organizational structure and results from a financial analysis.

The recommended implementation plan will help reorganize current organizational structure into a matrix structure.

MEMORANDUM

TO: Lou DesFosses, Executive Vice-President
FROM: Mark Smith, Administrative Assistant
DATE: October 31, 1993
SUBJECT: Recommending of a new pricing policy

EXECUTIVE SUMMARY

The purpose of this report is to deal with the continued losses exhibited here. The reasons for this problem include; saturation of the market, inability to reduce costs, lack of product differentiation, price sensitive buyers, and the driving force of the capacitors dependent on the sales of heavy equipment.

These problems were brought to attention by reviewing the different strategies applied here. A further review of trends of the market, and past pricing policies show many weaknesses. In the past five years the methods employed have not been efficient.

Due to market saturation, there is a need to drive competition out of the market. By doing so, prices once again would be raised to a profitable level. A recommendation would be to become a price leader to obtain this goal.

Harmfulness of Abusing Narcotic Drugs

The term narcotic drugs includes opium and its derivatives such as heroin and morphine. When the abuser of a narcotic becomes addicted, his body requires larger and larger doses of drug. When the addict stop using the drug, he may sweat, shake, and suffer leg cramps. Abuse of narcotic drugs not only harmful to the individual, but also inhibit the society. It is because drug abuse will certainly will produce an economic losses and crimes.

Federal government has regulated the manufacture and distribution of narcotics. Nevertheless, laws and regulations are designed to insure an adequate supply of narcotics for medical and scientific needs.

Marihuana, which not a narcotic drug, does not cause any physical dependence. However, it can cause some psychic dependence. Federal and state laws deal with marihuana as severly as if it were a narcotic. Prescription of a physician is essential in order to get a narcotic or maurihuana product.

Breaking the laws that deal with narcotic and maurihuana can have serious effects on the lives of the addicts. A conviction can complicate lives in many aspects, such as prevention of entering medical profession.

Harmfulness of Abusing Narcotic Drugs (Early Revision)

The term narcotic drugs includes opium and its derivatives such as heroin and morphine. When these drugs are taken over and over again they will lead to psyical addition. This occurs when a person's body needs the durg to survive. Then the abuser of a narcotic becomes addicted, his body requires larger and larger doses of drug. If the addict stops using the drug, he will suffer from withdrawl. Because the body is psyically dependent on the drug he will have withdrawl symptons. He may sweat, shake, and suffer leg cramps. Adiction and withdrawl can be a dangerous and deadly experience.

Abuse of narcotic drugs not only harmful to the individual, it is also harmful to society. Drug abuse produced economic losses and crime, has and will produce more in the future. One way to stop drug abuse is to attempt to regulate drug flow.

The Federal government has regulated the manufacture and distribution of narcotics. Even with these regulations there is still a heavey drug flow. Nevertheless, laws and regulations are designed to insure an adequate supply of narcotics for medical and scientific needs. In some cases narcotics can be helpful.

Marihuana, which not a narcotic drug, does not cause any physical dependence. However, it can cause some psychic dependence. Federal and state laws deal with marihuana as severly as if it were a narcotic. Prescription of a physician is essential in order to get a narcotic or marihuana product.

Breaking the laws that deal with narcotic and marihuana can have serious effects on the lives of the addicts. It can deprive you of a proffession, put you in jail, or even kill you.

Market Strategy: MKC

They are: concentration, integration, and related diversification. MKC has been using these three strategies with concentration being the core one.

Concentration is the major focus of MKC. They have intentionally kept there products to a narrow line in order to accomplish this. They have also focused on one marketing channel, that being direct sales only.

With direct sales it is a natural integration to the customer. You can't really get much closer than right in their living room. Also, MKC has fully integrated towards the supply side. They have their own manufacturing plant and control all functions leading up to the customer.

While their product line does stay fairly narrow compared to other cosmetics firms they still have to a point attempted some related diversification. Now in addition to skin care they have developed into makeup and hair care. MKC has also introduced a men product line called "Mr. K." All the products that they have created still have at least one element in common, skin care. With all the products related like that, they are able to capture a larger market share in their core business.

This also creates an overlap in the activity cost chain. With this overlap existing resources can be used for more than one product. The multiple usage creates synergies and causes the company to get more out of the resources.

By hosting home parties and teaching skin care at them, MKC provides a service that no other company does....

Sleep Deprivation

Sleep is a necessary component of human existence so lack of sleep can be serious health problem. Sleeplessness can be caused by several different factors; one being the intake of certain fluids by the body. This can be easily remedied once the exact cause is found. There have been studies performed that reveal what intake is helpful or harmful to promote or decrease sleep, although many researchers believe that every person is different. "Each person undoubtedly has his own checklist for a comfortable environment that may involve the temperature of the room, the weight of the covers, the presence of another person, noise, darkness, or barometric pressure, certain reading material or a long walk." (Luce, G. and Segal, J. 1969. Insomnia. New York: Doubleday and Company, Inc.) Common logic tells us that of course, everyone is different, but studies can show how the majority or average people are affected by certain fluids.

The old standby of superstitions that everyone seems to be familiar with is that warm milk will help induce sleep. This is somewhat true. A chemical called tryptophan is one of the amino acids found in many substances including milk. Tryptophane has been proven to cause drowsiness. Harold L. Williams at the University of

Oklahoma Medical School performed a study concerning tryptophan and found that tryptophan seemed to make people fall asleep faster and sleep deeper. He concludes that "A high protein athlete's diet at dinner, and a glass of milk some time before bed ought to have and effect." (Insomnia. 1969.) Others feel that the calcium content of milk also causes drowsiness. (Chapelle, J. and Kohler, M. 1965)

Is Female Alcoholism Due To Past Family Life Or By Society And Environmental Expectations?

Alcoholism is a disorder that causes great destructive power. It is a chronic behavorial disorder brought about by continual drinking of alcoholic beverages in excess and to an extent that interferes with the drinkers' health, social, and economic functioning. Alcoholism varies with social class, occupation, geographic region, and ethnic group. The incidence of alcoholism in women has been steadily increasing during the last decade due to increasing self-disclosure of women. Adult women who come from alcoholic families are more apt to become alcoholics themselves than women who come from non-alcoholic families.

There are hypothesized theories on why people drink. In Estes and Heinemann's 1977 report on Alcoholism, Bacon believes that given any society where there is a lack of indulgence of children who have demanding attitudes toward achievement and a restrictive stature toward dependant behavior in adults, alcoholism will occur. One good example of this is Italian people who have low alcoholism cases. Children are introduced to alcohol through family and religious gatherings and showed the proper use of alcohol.

Other cultural theories see alcoholism as a consequence of downward social mobility, i.e., job, income, perhaps starting prior to the drinking. This happens when the individual fails to participate in activities with the community which could trigger frustration causing alcoholism. Yet another theory correlates tension and stress to alcoholism. There are problems however of precisely measuring stress levels between societies or subgroups.

What is Credit?

The word credit has many different interpretations to different people. The most common implication is to receive merchandise now and pay later. The credit card is associated with purchasing now and paying in monthly installments. Some think credit refers to one's reputation. The use of the word deals with credibility. This credit acknowledges a sense of worth or accomplishment about one's character. Another use of credit is used by billing companies. When you send in a payment for your telephone bill, ATT reduces or credits your account. Banks also refer to withdrawals and others fees as an deduction or credit to one's account. As you can see, credit can mean an increase, decrease, or a judgement about a person's character.

The word credit is a accountants' term that means the right side of two columns. Many financial statements, journal entries, and accounts are set up with two columns. The first column, which is the left, is referred to as a debit. The right side is called the credit side.

The accountants' definition of credit has many similarities and differences with the credit card user's view. Again, the credit card user sees a credit as an increase in the total amount of the bill outstanding. For the accountant, this is partially true. When a person buys merchandise on account, the accountant does increase the consumer's account with a credit; and, yes in this instance, it does represent an increase in the buyer's account. On the other hand, accountants have other accounts; such as: equipment, supplies, that do not increase on the credit side. For these accounts, to increase means to debit--left column--the account. So, the credit card user's definition is incorrect because credit does not always mean an increase.

The word credibility has no meaning to an accountant in terms of whether to debit or credit an account. To be frank, I don't know how billing companies came up with their interpretation of credit. Again, they see credit as a reduction in a account.

Again, credit is an accounting term that means right side insead of the left side. I believe the many interpretation of credit originated from the accountants' use of the word.

Property Taxation for Financing Education

The tax on property to raise revenue has been around for centuries. The primary use of this revenue has been to finance education. This form of tax has within a couple of decades been subjected to wide debate. Many state governments are finding the property tax unconstitutional because of inequity problems. This paper also includes a decision of problems that the property tax is faced with, and probably solutions. This change has resulted in the use of alternatives to raise revenue to replace the property tax or be a supplement to it.

The property tax is a tax on wealth, or certain aspects, such as property. The property which is usually considered for taxation is tangible or real property. Real property takes the form of land and improvements to the land as in buildings. These items are hard to conceal, and are used to measure the ability to pay, resulting in the property tax base. The tax liability continues to be based on the value of property owned, rather than a person's total wealth, income, or their measures of ability to pay.

There are advantages to the current property tax system. The first advantages is the fact it has been around for centuries. The administrative and compliance costs are relatively low. Another advantage is the fact that the revenue generated by this tax has been the number one source for financing education. The property tax compared to any alternative is the only one that has the capability to generate enough revenue....

The Clean Air Act

Many billion years ago there was a land and plant. Later we got the underwater animals. Another billion years later we had horses yet and some strange animals. There were a lot of monkeys. They walked on the arms and feet. They love to live on trees. Later they got down to eat some plants. They reach the leaves from the trees by using arms and feet. So they tried to sit up on the feet and it worked. They walked on the feet. They monkeys became people in million years later.

You have to come up with a bill which tackles the issue of acid rain rather than just acknowledge the presence of it. Since 1981, Congress has been trying to pass legislation on acid rain and have met with red tape. Why is this the case? Is it the government, which has been unable to accept acid rain as a reality, or industry, not wanting to incur the costs and the fear of limiting industrial growth? Is it the power struggle going on in Congress on what should be included in the bill? I plan to explore the issues and see if there will be a viable solution to this problem.

When one reads about acid rain, you always hear about the Clean Air Act. The Clean Air Act was first enacted in 1970. It deals with fuel emissions and setting up air quality regions. This act does not deal with acid precipitation or deal with the long term transport of air pollutants! The fault with this bill was that it encouraged pollution on a wide scale. The regulations that were implemented were that emission standards had to be reduced over a five-year period. The main purpose of this bill was to protect the public. They came up with a new Clean

Air Act in 1977. It basically enforced the same guidelines included in the 1970 Clean Air Act. This brings us to the present, which now has a new Clean Air Act in the works in Congress.

The name of the proposed bill is S 321. It was introduced by George Mitchell D-Maine. It was introduced in 1987. Several goals were included in this bill. The reduction standards for communities to meet carbon monoxide and ozone reduction levels. The EPA feels that large areas will not be able to meet these standards. They wanted reductions in sulfur emissions by 12 million tons and nitrogen emissions of 4 million tons by 1996. The main goal of this bill is to reduce air pollution by the year 1992. It will set up time tables for communities to reduce their levels of emissions. Here are some of the proposed provisions. Senator Robert Stafford of Vermont proposed that cities that go over air quality standards by 125 percent be given a 15 year time allowance to get their emission levels back down....

WRITING PEDAGOGY STRANDS

The chart on the next page traces vertically several movements in writing education, the order in which components occur or are taught. (The items are not necessarily related horizontally.)

Instructional Level	**Person**	**Audience**	**Process**	**Asking Questions**	**Mode of Development**	**Features of Writing**	**Genre**	**Text**	**Course Topic**
Easy Things	Self	Students Address Relatively Sympathetic Readers	Fluency Invention	What	Narration	Clarity	Read and Write Narratives	Whole Paper	Invention Exploring Self
	Family		Revision	Who				Abstract Summary Paragraph	
	Friends		Development	When		Development			Exploring Subject
			Controlling Ideas (Thesis)	Where	Description			Thesis Statement	
Harder Things					Exposition		Read and Write Expository Prose		
	Others	Students Address Neutral Readers	Organization	What	*-Definition* *-Classification*	Organization			Arrangement *-Overall Patterns*
									-Paragraph Blocks
More Difficult Things			Coherence	Why	*-Before/after* *-Cause/effect*	Coherence Conciseness			Coherence Conciseness
			Editing		*-Comparison/ -Contrast*	Style Tone			Style Tone
				How	*-Process -Analysis*				Word Choice
Challenging Things	Public	Students Address Skeptical Or Hostile Readers	Proofreading		Argument	Surface Feature Correctness	Read and Write Arguments	Title	Conventions Documentation

CHAPTER 4
EDITING AND PROOFREADING

One writes out of one thing only--one's own perspective.
James Baldwin

Write not what you are supposed to say, but what you mean to say.... If you want to communicate first say exactly, and I mean exactly, what it is you want to say, no matter what.
Barrett Mandell

Seventy-six percent of executives polled would not hire job candidates who had one or two typographical errors in their resumes. And 45% said it would take only one typo to eliminate a candidate from consideration.
Diane Domeyer, executive director of OfficeTeam[1]

STYLE AND EXPRESSION

Read this:

The problem of order, and thus of the nature of the integration of stable systems of social interaction, that is, of social structure, thus focuses on the integration of the motivation of actors with the normative cultural standards which integrate the action system, in our context interpersonally. These standards are, in the terms used in the preceding chapter, patterns of value-orientation, and as such are a particularly crucial part of the cultural tradition of the social system.[2]

Talcott Parsons

Now read this:

What? NAW. That ain't no way to write a damn sentence! That's the limpest damn piddliest damn saddest-looking most clogged and whiney damn hitching-around piss-and-corruption-covered damn sentence I ever saw.

Boy! Anybody can snuffle along through the pine straw! I want to see you down with your teeth in the dirt! Reaching and gnawing and chewing and gnashing on some oak tree roots! Right on down through to where the juice is. Git it. Drive. Show me something![3]

Roy Blount, Jr.

Ask your students: Which author above would you rather sit next to at dinner? Discuss in what situations might we choose a style like Parson's or one like Blount's? In what situations would neither style be appropriate?[4] The important point is that we are judged by how we speak, by what we write. How we write defines us. This brings us to the subject of style.

The definition of style is broad as well as elastic. There is no such thing as a correct style or an absolute best style. But style is influenced by

- writers' choice of material;
- writers' organization of material;
- decisions about the amount and placement of detail;
- writers' motivation for writing it;
- writers' physical and mental state at the time of writing;
- readers' familiarity with the subject;
- readers' attitude toward the subject, the writer;
- readers' physical and mental state at the time of reading;
- readers' motivation for reading it;
- readers' expectations about style; and
- the physical appearance of the text: layout, type size,font.

Style is who we are. We have learning styles, teaching styles, and so on. A person's thinking style is developed over a long period of time. It is generally the result of three factors: (1) a natural inclination toward a particular thinking style; (2) modeling, through such mechanisms as trial-and-error and positive reinforcement; and (3) the formal education process.

For our purposes, I think of style as *choice*. Although our students may not be aware of it, we make decisions every step of the way in virtually all our writing, from what word to use, to where to break for paragraphs, to how to arrange syntax (based on what we sound like or would like to sound like). Given that explanation, style has inexhaustible manifestations. I look at features of style endemic to professional writing that produces obscurity: overwritten prose or doublespeak, heavy nominalization, heavy fronting of nouns, the passive voice, awkward or careless word orders, wordiness, and inconsistency of point of view (see Surface Feature Correctness Exercises in Appendix Part 1).

■ Clarity

Official, overdignified, or pedantic language comes from our urge to show off. Absolute clarity should be the quintessential goal of all professional writing. While much of this section comes from current practices in corporate communications, the principles are sound and, in large part, apply equally across the disciplines. Aim for 100% understanding. Select a strong vocabulary and the clearest words. Less is almost always more. An impressive piece of writing is one in which we hardly notice the skill with which it has been written. Simplicity is almost always a virtue, so espouse Thoreau, sportscaster Red Smith, and E.B. White. Notice the impact of simple, clear language:

Examples:

Complicated: As is demonstrated by the enclosed check in the amount of $596.32, the job has materialized, and we have finalized same.
Simple: We have completed the job. Enclosed is the check for $596.32.

Complicated: I hope you are cognizant of the fact that you are expected to modify and ameliorate the methodologies with which you demonstrate productivity in order to conform to the designed objectives of the project manager.
Simple: Show results.

Complicated: An investigation was inaugurated to confirm the combustibility of the material.
Simple: We tried to burn the material.

Complicated: Lack of dimensional integrity will result in severe dysfunction.
Simple: It is bent. *Or,* It won't work.

Complicated: That portion of a means of egress which is separated from all other spaces of the building or structure by construction or equipment as required in this subpart to provide a protected way of travel for the exit discharge.
Simple: The Exit.

Lapses in Clarity. Sometimes incorrect or misplaced modifiers produce lapses in clarity. Sometimes it is a writer's urge to sound erudite. In this case writers using bloated or empty language end up sounding pompous and elitist. Worst of all, the material becomes unreadable.

Examples

1. His argument that the economy of a country rich in resources could be sustained when in isolation from the economics of the other countries collapsed when the devaluation of the pound sterling began to erode our own dollar.

History Professor

2. White boy politics only perpetuates Manichaean bifurcation and its inevitable privileging of the repressed binary in an endless seesaw of power dynamics.

   Ph.D. student, U of Minnesota

3. The child literally uses expressive writing to manage successful negotiation of those developmental stages prerequisite to a change in perceptions of self.

4. In challenging philosophy's guiding assumption that it can ultimately arrive at "'foundations' to which one might cling, frameworks beyond which one must not stray, objects which impose themselves, representations which cannot be gainsaid,"[5] he urges that the discipline turn its attention instead to how conceptions of "truth" arise through social practices and social vocabularies of justification which might wind up being replaced by others which are in some sense more useful.

5. In this regard, the Habermasian representation of consensus as a counterfactual anticipation of fully realized communication offers students a critical tool to identify the structures of power which determine who may speak and what may be said.

   John Trimbur, College English

6. Weaknesses are the absence of a graduate program, a tight budget, and lack of an acquisitions budget for the library. We concur in this appraisal, and add an item to the list of possible weaknesses. Specifically, we wonder if the undergraduate degree-completing program is now vulnerable due to initiatives in feeder, non-degree training institutions.

   Dean, Graduate School, UM-St. Louis

7. I take the well-entrenched literariness of Hebrew prose to be a germinal manifestation of the Israeli brand of the Serious Language Principle, whereby things we take seriously are expressed in a specific type of language and, conversely, the occurrence of this type of language signals a required appropriately serious response. I'm referring of course to language's role as a central tool of hypocrisy.

   Mazali, American Book Review

8. Objective consideration of contemporary phenomena compels the conclusion that success or failure in competitive activities exhibits no tendency to be commensurate with innate capacity, but that a considerable element of the unpredictable must invariably be taken into account.

   Orwell, Politics and the English Language

9. While there are important needs for general activities and they are included in our planning, the core of any plan must be to provide resources and opportunities at more local levels because the nature of the most effective actions will be very different in different areas and the effectiveness of many plans will be directly proportional to the degree to which they emerge from the immediate area.

   College Administrator

10. Insufficient mediated learning experience, as the proximal determinant of cognitive deficiencies such as those manifested by the syndrome of cultural deprivation in reduced modifiability, is amenable to meaningful remediation. Structural changes

can be produced that overcome the distal determinant that has produced lack of mediated learning experience, that transcend the degree of severity of the condition of the affected individual, and finally that cut across the stages of development of the individual.

Feuerstein and Jensen, Educational Forum

11. Sociologist Paul Diesing believes that a holistic research method centering on the empirical observation of behavior in the ecology in which it occurs, is necessary because it allows for greater insight into the function of behavior within the total framework of interactions that constitute the boundaries for the behavior under investigation, allowing the observer to view the total scope of behavior in its natural setting, while pursuing questions about the functioning of individual elements within the whole.

Chris Madigan, U of Iowa

12. On the other hand, it is not practicable to deal with the subject, in this first chapter, to the full limits of even the restricted extent which I contemplate, for certain of the points which I wish to emphasize are too closely bound up with experimental results to admit of convenient discussion before the experiments have been considered. I shall therefore revert to the subject again in Chapter VII.

Broadbent

13. In establishing a new frame of reference, a hierarchical critique, a dialectical polemic, or a mythic narrative, people who worry about the ungiveness of the given may appear blind to the virtues and comprehensiveness of the Aristotelian eye for detail and for conventional and productive style of explication.

James Murphy,U of California, Davis

14. Because hegemony depends on the masses' willing consent to the moral and intellectual leadership established by state and corporative leadership and because the established (though necessarily protean) web of institutions, social relations, and ideas must be created and re-created throughout the society, it is necessary to convince the masses that the societal organization is objectively correct, in concordance with nature or at least with necessity.

Charles Payne, "Relativism, Radical Pedagogy, and the Ideology of Paralysis," College English

15. The influence of the African cultural dynamic on mainstream America cannot be underestimated. The fruit of that nurturing is available 24 hrs. a day in media advertising. I propose to investigate the extent to which these elements in late 20th century African-American dialectic have been emulsified in transliteration into America's medial and culturo-linguistic forms. I would like, in other words, to look at what amounts to a kind of Africanization of popular language.

Graduate Student, Brockport

16. I would rather detail this area of rhetoric in this comprehensive way for two reasons: by expanding this paper upon developing rhetoric, I feel that the inclusion of

retrospective integration will ultimately provide me with a better overall understanding of the subject matter; and secondly, that this approach would also allow for a more effective interpretation of Basevorn's work.

Graduate Student, Brockport

17. Graduate Humanists often contemplate non-teaching career choices across an imagined strait crammed with hungry sharks. A perilous ride with Charon will carry them from Academe's parched groves to the fearsome shore where all creatures sell insurance, soap and themselves. Even those who have slid from Ph.D. programs into law or business schools sometimes are so busy cutting their teeth that they lose sight of the numerous non-academic professionals who pursue cultural interests, serve actively on non-profit boards, and know which end of a sonnet is up. These civilized amenities aside, it is still likely that the graduate Humanist will find the government of nonprofit sectors--with such options as consumer advocacy, arts management or social services--more fully consistent with her or his training and interests....
18. These points sketchily suggest that the Scylla of a shrinking teaching market and the Charybdis of selling soap do not constitute, for the graduate humanist, an unsavory binary choice; they are polar extremes instead. Between them lies not a narrow channel but a broad spectrum of institutional choices for that person who will nurture an entrepreneurial sense and grow slightly thicker skin. Where and how to explore the third sector will largely depend on the individual's experience and temperament. But the liberal traditions of the Humanities themselves should spur us to look beyond the easy choices of teaching and oblivion. The waters into which we dive may prove a calm bay, rather than a turbulent strait; and the sharks may keep their distance.

John Cullinan, U of Chicago Business School, MLA Newsletter

How to Write Official[6]

1. Start with a simple statement: *We quit. Why? Nobody knew how to program the computer.*
2. Put it in the passive voice, and dilute the responsibility: *It was decided to quit.*
3. Expand with terminology that does not add meaning: *It was decided to terminate.*
4. Build in noun strings: *It was decided to terminate project processes.*
5. Add a qualifier of uncertain relation to the original statement: *On account of the status of the computer, it was decided to terminate project processes.*
6. Add noun strings and terminology to the qualifier: *On account of the status of the computer program assessment planning development effort, it was decided to terminate project processes.*
7. Separate related words: *On account of the status of the computer program assessment planning development effort, it was decided to terminate until a later date project processes.*

8. Equivocate or shift meanings: *On account of the uncertain status of the computer program assessment planning development effort, it was proposed and tentatively accepted to terminate until a later date project processes.*
9. Obfuscate: *Due to uncertainties in the status of the computer program assessment planning development effort, proposals were carefully considered and tentatively adopted to suspend temporarily until a later date project processes.*
10. Cover your tracks, make yourself look good: *Due to the unavoidable uncertainties in the status of the computer program assessment planning development effort, a number of contingency proposals was carefully considered and one was tentatively adopted to suspend on a temporary basis until a later date those project processes deemed unessential to the expeditious fulfillment of contract requirements.*

■ Nominalization

Nominalizing is the process of using verbs in their noun or Latinate forms. The nominalized form is useful for titles and subheads (for examples, Resource Utilization; School Assessment Policies Implementation; Customer Satisfaction; Market Share; Sales Department Innovations; Roadside Breathtesting Surveys; Quality-Rating System for Production Material Suppliers). It proliferates in professional writing because it is high-sounding, but it takes up space and is sluggish compared to its active counterpart. We should use this form mainly for short and familiar terms. Otherwise, we should try to replace them with the direct verbal form (agent-action-goal/object).

Heavily Nominalized: The development of hardware to provide...
Lightly Nominalized: Developing hardware to provide...

Heavily Nominalized: If the repudiation of the policy...
Lightly Nominalized: If repudiating the policy...

Heavily Nominalized: to assist you in the enhancement of your system...
Lightly Nominalized: to help you enhance...

Examples

1. In this way, verbal expression may serve a highly useful role in the business of taking advantage of the adaptiveness of emotion.

   Psychologist Carroll Izard
2. Thank you for your assistance in my compliance of this requirement and for all the help you have provided in the past four years.

   United Van Lines

3. Thus, antecedents may make no difference in the prediction of attitude toward the act, but attitude toward the act could still be predicted on the basis of the perceived consequences.

Homer Miller

4. Apperception meant the making conscious of phenomena and the assimilation of these phenomena into a body of conscious ideas, namely, the apperceptive mass.

Alice Brand

■ Fronting of Nouns

Noun modifiers are chains of nouns or adjectives that qualify a noun. The heavy fronting of nouns result in generally long, impenetrable language that we associate with jargon. **Noun strings** or **noun compounding** (also called stacking or pyramiding modifiers) proliferate when people want to sound important. They have an unnatural structure, cloudy meaning, and a leaden effect. People just don't talk that way. We should reduce the density and confusion that comes with long noun strings or the heavy fronting of nouns by spreading the words out. It may make the statement longer, but this language is genuinely appreciated because it flows easily and sounds conversational. The examples show how obscure meaning becomes when Latinate forms of words are stacked up in front of the base noun. Some phrases can become so heavily modified that they defy untangling:

Examples

Problem-Reformulation Training and Visualization Training with Insight Problems

Corporate Communications Network Processing Service, and Quality-Rating System for Production Material Suppliers

Heavily Modified: a Harvard Business Administration School student
Lightly Modified: a student at the Harvard School of Business Administration

Heavily Modified: We must aggressively seek customer satisfaction.
Lightly Modified: We must aggressively seek to satisfy our customers. *Or,* We must satisfy our customers.

Heavily Modified: professorial-rank faculty member's responsibility
Lightly Modified: the responsibility of faculty members with professorial rank

Heavily Modified: the old area's football team's coach
Lightly Modified: the coach of the football team from the old area

✍ *Exercises*

Reduce the modification in these sentences:

1. These are final council meeting arrangements.
2. This recommendation is subject to the Supplemental Agreement detailing prospects' commitment.
3. The board voted for expanding the training center's programs offerings.
4. The objective of this course is to improve the non-native speaker's competence in English expository prose writing.
5. The quarterly training reinforcement test schedule is now posted.

■ Passive/Active Voice

When appropriate, we should insist that students use active verbs rather than the passive verb forms of *to be*, the passive construction of *by* (someone) or *there is/there are*. Occasionally, passive verbs and constructions are useful in order to avoid a discourteous tone or to avoid identifying someone or something. However, the active voice is direct and vivid. It clearly tells who-does-what. The passive voice is awkward, often incomplete, and evasive. It clouds who is responsible. The passive is cowardly. Good language requires the courage of the speaker's beliefs. The active voice asserts; it brings the writing to life. The passive verb is lifeless and dull. In the active voice, the subject acts; in the passive, the subject is acted on.

Passive: The job was completed.
Active: David Hall finished the job.

Passive: The assignments will be made tomorrow.
Active: John Jones will make the assignments tomorrow.

Passive: Your report was received by John Jones.
Active: John Jones received your report.

Passive: A request for an explanation of the charges was made.
Active: The Vice President requested an explanation of the charges.

Passive: Several typographical errors were contained in the report.
Active: The secretary made several typing errors in the report.

Passive: Delays in this office are caused by clerks who take long coffee breaks.
Active: The clerks who take long coffee breaks cause delays in this office.

Passive: Opposition to the proposal was voiced.
Active: The Ohio senators opposed the proposal.

Passive: Your contract will be effective as of August 1, 1983.
Active: Your employment contract begins August 1, 1983. *Or:* Your contract takes effect on August 1, 1983.

Passive: Last month there was an increase over the month before in the number of sales made by the men in the field.
Active: Last month the field representatives topped the sales of the previous month.

Passive: There were only two people left in the office after 5 P.M.
Active: Two people remained in the office after 5 P.M.

Passive: It is conceivable that we made a mistake.
Active: We may have miscalculated the labor charges. *Or.* We may have erred.

✍ *Exercises*

Recast these sentences using the active construction.

1. I was shown the architect's model by the tour guide.
2. It was assumed that the gearbox would be adequately cooled by a stream of air.
3. The treasurer's report will be audited by the finance committee as soon as it has been received.
4. When a bumper jack is used, be sure the car's wheels are blocked and a firm surface is chosen for the base of the jack to rest on.
5. If the identity of the signer is not known by you, the signature block should be omitted until the letter is signed by someone.

■ Emphatic Word Orders

Stylistically, the most emphatic positions in a sentence, paragraph, or larger units of prose are at the beginning and the end (the remaining material is placed in the middle). Used judiciously, the first and last positions add interest and power to writing. (For sentence coordination and subordination, see thesis statement section in Chapter 3.)

Weak: The office will be closed next Monday, which is Lincoln's Birthday.
Strong: Next Monday, Lincoln's Birthday, the office will be closed.

Weak: The partnership of Johnson and Smith was dissolved last Monday.
Strong: Last Monday, the partnership of Johnson and Smith was dissolved.

Weak: At a space velocity of six, the yield was two percent higher than at a space velocity of eight.
Strong: The yield was two percent higher at a space velocity of six than at a space velocity of eight.

Weak: *How Stella Got Her Groove Back* (novel by Terry McMillan)
Strong: *How Stella Got Back Her Groove*

■ Whiz Deletions

Avoid whiz deletions (particularly relative pronouns) when their omission causes confusion, for example:

- He wasn't going to be the doormat *that* Angelo insisted he was.
- Soy is the only food *that* we harvest that we refuse to eat.
- *Instead of:* The administrators want the scores determined by holistic scoring. *Try:* The administrators want the scores to be determined by holistic scoring.
- The aim of this essay is to relate the reasons *that* Tompkins believes feminist critics should take off from personal experience.
- The essay is a critique of the way *that* we write.

■ Conciseness: Rhetorical Repetition versus Redundancy (see also paragraph breaks)

Students might like to see this:

> SOMEBODY ~~HAS~~ SAID THAT WORDS ARE ~~A LOT~~ LIKE INFLATED MONEY--THE MORE ~~OF THEM THAT~~ YOU USE, THE LESS EACH ~~ONE OF THEM~~ IS WORTH. ~~RIGHT ON~~. GO THROUGH YOUR ~~ENTIRE~~ LETTER ~~JUST~~ AS MANY TIMES AS IT TAKES. ~~SCRATCH OUT AND~~ ELIMINATE ALL UNNECESSARY WORDS, ~~AND~~ SENTENCES--EVEN ~~ENTIRE~~ PARAGRAPHS.

Good writing is cogent and concise. It has been trimmed down to essential language. It uses no cliches (no stereotyped or meaningless expressions), no extra words, and no unnecessary information to confuse or bore readers. The material is not excessively long; it neither looks bulky nor choppy. Sentences and paragraphs are as long as necessary to accomplish their purpose.

By the same token, a concise sentence is not guaranteed successful. Writers must distinguish between language that is used for certain effects and mere wordiness that stems from carelessness or lack of judgment. Depending on the writer's objectives, brevity may or may not be desirable in a given communication. We should not sacrifice clarity or courtesy for the sake of brevity. In business and the professions, eliminating necessary information merely leads to extra communication and additional expense. So, if the economy of words (a ratio between the number of words and the amount of meaning they convey)[7] results in curtness and disrespect, goodwill is sacrificed. There is no shortcut to good human relations.

While redundancy is the careless repeating of ideas to be edited out as the writing undergoes revision. Rhetorical repetition is the deliberate duplication of a word or phrase intended to change readers' minds, convey importance, the need for action, and so on. The "I Have a Dream" speech of Martin Luther King is the quintessential example of rhetorical repetition. Mere wordy sentences lose readability and coherence because of the extra load they must carry. Wordiness is understandable in a first draft, but it should not survive revision. This truth holds: "I would have written a shorter letter if I'd had more time."

Wordy: These are the recommendations of some of the committee.
Concise: Some committee members made these recommendations.

Wordy: His report is a request that we conduct a field test of the soil.
Concise: His report asks that we field test the soil.

Wordy: Our past experience with Mr. Thomas has been of a favorable nature, and we are of the opinion that he should be entitled to the usual courtesies ordinarily extended your guests.
Concise: Our experience with Mr. Thomas has been favorable, and we believe he is entitled to the courtesies extended your guests.

Wordy: In view of the fact that a large number of people have expressed the opinion that they would like to have a larger number of chairs brought into the conference room, we have given serious consideration to the matter and have come to the conclusion that we should expand our current seating arrangement and purchase additional equipment.
Concise: We are buying more chairs for the conference room.

Wordy: Everybody who works in the clerical department should remember that when filling out the procedure reports, which we all know are filed chronologically, to please fill in the date.
Concise: Because all procedure reports are filed chronologically, please date them.

Wordy: It does not seem likely that any of these developments will be of such a serious or lasting nature as to have other than a transitory adverse effect.
Concise: These developments are not apt to have a lasting adverse effect.

Wordy: For example, given only the quarterly figures for the spending flows of the four groups, namely personal consumption expenditures, private domestic investment, which is broken down into fixed investment and the change in inventories, government purchases of goods and services, and net foreign purchases, equal to exports minus imports, a series of quarterly increases in inventories whose size appears to be far out of line with the increases in other flows such as consumption expenditures suggests the possibility of a recession ahead to be excessive inventory accumulation.
Concise: For example, given the quarterly figures for a series of increases, the size of inventory which appears radically different from that in other flows, an economist might forecast a recession that would correct what seems to be excessive inventory accumulation.

Wordy: While this is one way in which things may work out, it is a way that will occur only if the commercial banks have "in stock" the amount of foreign currencies needed to meet the excess of the amount importers and others wish to purchase from them over the amount exporters and others have to sell them.
Concise: Things may work out this way, but only if commercial banks can keep enough foreign currency "in stock" to compensate for the difference between the purchase demands of importers and the selling needs of exporters.

Wordy or Incorrect Phrase	Suggested Change
accounted for by	due to, caused by
actual truth	truth
add the point that	add that
advanced forward	advanced
aggregate	total
a great deal of	much
a large number of	many
along the line of	like
a majority of	most
analyzation	analysis
an example of this	for example
is the fact	(omit entirely)
another aspect of the situation to be considered	as for
a number of	several, many
a small number of	few
appreciate it if you	appreciate your

at regular intervals of time	regularly
based on the fact that	because, since
brought to a sudden halt	stopped
call your attention to the fact that	notify you, remind you
clever new innovation	innovation
commence	begin
communicate	write, telephone
complimentary passes	passes
concerning, concerning the nature of	about
consensus of opinion	consensus, opinion
definite commitment	commitment
due to the fact that	because, since
during the summer months	during the summer
during the time that	while
effectivity	effectiveness
employ	use
enclosed herein	enclosed
endeavor	try
end result	result
exact same	same
except in a small number of cases	usually
exhibit a tendency to	tend to
false illusion	illusion
few in number	few
final completion	completion
final conclusion	conclusion
finalize	make final or formal
first of all	first
for a period of two weeks	for two weeks
for the reason that	because, since
from the point of view of	for
future prospects	prospects
if at all possible	if possible
impact upon	make an impact on
inasmuch as	since
in close proximity	near
in favor of	for, to
initial	first
initiate	begin
in light of the fact that	because
(have) input into	contribute to
in rare cases	rarely
in spite of the fact that	although, though
in the amount of ten dollars	for ten dollars
in the area of	(omit entirely)
in the course of	during
in the event that	if
in the first place	first
in the majority of instances	usually

in the near future	soon
in the neighborhood of	about
in the normal course of our procedure	normally
in the not-too-distant future	soon
in the opinion of the writer	in my opinion, I believe
in the vicinity of	near
in view of the above, in view of the foregoing circumstances, in view of the fact that	therefore
involve the necessity of	require
is defined as	is, means
is of the opinion that	thinks
it is clear (obvious) that	clearly, obviously
it is our conclusion in the light of investigation that	we conclude that, our findings indicate that
it seemed to be	it seemed
it was noted that if	if
it would not be unreasonable to assume	I/we assume
linkage	link
made a study of	studied
make an examination of	examine
modification	change
necessitate	require, need
not any one of the two	neither
not of a high order of accuracy	inaccurate
notwithstanding the fact that	although
of considerable magnitude	big, large, great
of very minor importance (import)	unimportant
on a few occasions	occasionally
on one occasion	once
on the grounds that	because
optimize, maximize	make full/maximum use of
orientate	orient
other alternative	alternative
outside of	outside
owing to the fact that	since, because
partially	partly
past history	history
perform an analysis of	analyze
personal opinion	opinion
presently	now
prior to, in advance of	before
prioritize	set priorities
proceed to investigate	investigate, study
put in an appearance	appeared
question as to whether	whether
reason why is that	because
refer back to	refer to
relative to this	about this

resultant effect	effect
set a new record	set a record
spell out in exact detail	explain
subsequent to	after
sufficient	enough
tendered his resignation	resigned
terminate	end
the only difference being that	except
to summarize the above	in sum, in summary
transmit	send
under way	begun, started
usage, utilization	use
went on to say	said
within the realm of possibility	possible, possibly
with the exception of	except

■ Point of View/Use of Person

The pronouns *I, we*, and *us*, the first person point of view, produce writing that is both personal and inclusive. Writers and their readers are joined in whatever activity the text states or implies. Such a point of view is a great equalizer and projects a comfortable stance. The *you* or second person stance separates writers from their readers. It implies an instructional or, worse, accusatory posture that points a finger at readers and keeps writers immune from responsibility. The *he, she, they* pronoun forms and their permutations produce the third person perspective. Again separating writers from all others, this point of view tends to be more public and remote. Although consistency throughout the discourse may be difficult (as I have found writing this *Guide*), it establishes and sustains our relationship to readers. In addition, effective writing should be reader-based, showing an awareness of the needs of the audience while noting those of writers. When writers seek something for themselves without offering anything to readers, when they express only their views--the communication cannot be considered completely successful, even if readers are persuaded.

> **Writers' Points of View:** The new C.A.P.S. is the best system we have made and stands out among competitive machines for its efficiency and low cost.
> **Readers' Points of View:** We would like to demonstrate the C.A.P.S. so that you can discover for yourself how efficiently it works.
>
> **Writers' Points of View:** We'd appreciate your business now.
> **Readers' Points of View:** It's a good idea to complete the work now when we have time to do the job perfectly.

TONE

The term, *tone*, in writing means much the same thing as it does when we speak of someone's tone of voice. Our word choice, our introduction or opening, even our method of development--all affect the tone of our material. It reflects a combination of our attitude toward our subject and toward our readers. For example, is our attitude positive or negative? Are we annoyed with readers? Do we want to come across like a bank officer? Do we consider readers to be ignorant?Unless we are careful, these attitudes come through in our writing. What actually matters is not only the denotation but also the connotation of words. Would we rather live in a shack, villa, castle, flat, bungalow, cave, domicile, or home? These are all forms of residences, but, based on the connotations they project, we choose the word that best suits our purposes.

Students typically go through several stages as they move from outside to inside a disciplinary universe of discourse.[8] Because these transitions can be stressful, we can help create paths into their chosen discipline through writing.

1. **Presocialized Level**[9]: Students at this level narrate or describe activities in the discipline. Students have a need to begin at the beginning. They often say too much and want only what is on the right side of the page (give teacher what teacher wants and write that way). When they enter a new field they want to sound like the experts. They want to master the knowledge (so their grammar and syntax may even temporarily fall apart). They learn the language of the field by rote, often not knowing what it all means.
2. **Socialized into the Field**: The individuals *know* everything. They have a lot of preinformation that we have given them. They know the jargon and use it, taking much for granted and leaving much unsaid. Because they consider themselves so deeply inside the discipline, they cannot talk to anyone else. Students at this level need help dewriting.
3. **Post Socialized**: Individuals shed the professional language that depends on disciplinary garb and jargon. They, in a sense, free themselves from texts. They give up the trappings of the discipline, the rites de passage that this requires. They are versatile. They can make themselves understood by almost anyone because they are comfortable with the material. At this level, for example, they give talks to people outside the field, rewrite the rules, and say what needs to be said. They transcend the tyranny of the here and now, the tyranny of jumping at the first thing. They transcend the tyranny of being blind to real issues, the tyranny of the printed word as authority.

■ Levels of Formality/Diction Level

Tone first refers to the degree of formality of the communication. The language we choose can be official, formal, informal, or colloquial. Each level suggests a different relationship with readers and conveys a different attitude. For example, a title such as "Some Observations on the Diminishing

Oil Reserves in Wyoming" clearly sets a tone quite different from "What Happens When We've Pumped Wyoming Dry?" In the long run, writing establishes better feeling and is more persuasive if positive and informal words are used. The established diction level governs the choice of words, phrases, and sentence structure. For example, we can ask students what diction level these statements connote about the paper that follows:

Official: Smoking is a matter of personal choice; it is not the business of government.
Formal: Harmful to users and nonusers, cigarettes should be outlawed in America.
Informal: Smoker's Rights
Colloquial: Joe Camel: My Hero

Examples

Official
Dear Mr. Grimes:

Pursuant to our understanding with respect to the disposition of your claim, we have approved same for settlement and are enclosing a release for your signature.

Kindly execute this release as per instructions, have your signature witnessed, and return in the self-addressed envelope.

Assuring you that a check will be mailed to you promptly, we are

Very truly yours,

Official
As requested in your letter to us of November 28, 1995, all of the $200,000 principal amount of your Corporations 5% Registered Debenture Bonds due 1970 called for redemption on December 1, 1993, at the principal amount thereof and three months' accrued interest have been presented to us and paid. After such redemption, there remains outstanding $85,000 principal amount.

With further regard to your claim covered by our File No. 1467B, we regret to advise that after due consideration of the circumstances surrounding the accident, the Claim Board has reached the conclusion that we are not justified in making payment in this instance.

Formal
Corporate Counsel:

It is now more than six weeks since we called your attention to the back-charges against the owner.

Again, we are enclosing copies of bills from E-M-E that we feel are legitimate back-charges against Mr. Leven. The bills are self-explanatory. Please see that a change order is issued to cover these expenses.The total charges to date is Three Hundred Ninety-Five Dollars and Eleven Cents ($395.11).

We expect you to take care of this within the next few days.

Very truly yours,

Formal
This will serve to introduce Miss Spender, who has been in our employ since July 2, 1984, as a typist in our Credit Department. Miss Spender, an excellent worker, is leaving our company on March 22, 1986, to reside in Puerto Rico. Mr. William Halsey of the New York Hilton Hotel, one of our valued customers, said you might know of some job opportunities for Miss Spender.

With regard to your recent inquiry, Mr. John Doan has been among our depositors since this office opened ten years ago. Mr. Doan maintains a satisfactory personal account on which balances average consistently in four figures, and he is also known to us in connection with several substantial business accounts. On the basis of our experience we have no hesitancy in recommending Mr. Doan as deserving of the usual courtesies.

Informal
Dear Susan Sperry:

You will be glad to know that your claim has been approved according to the terms we discussed.

All you need to do is sign the enclosed release in the presence of a witness and return it in the envelope we have provided. Your check will be mailed promptly.

Very truly yours,

Informal

We have your letter of September 25 requesting information concerning 300 shares of Blank Corporation that you sent us for transfer.

In order to help us identify the item, will you please note on the carbon copy of this letter the name of the person to whom the stock was to be transferred and also the certificate numbers of the shares you sent us? We would appreciate your writing on the enclosed carbon of this letter and returning it to us in the envelope we have provided.

I am sorry about the lost check. If you will complete the enclosed Affidavit, I will be happy to send you our official check for $256.70.

My face is red over the deal in sending you and Ed the tax information I promised. Life has been hectic, but not that hectic.

Lunch Friday will be just fine. See you at the Alumni Club at 12:30.

Colloquial expressions (those peculiar to a region) should be used with discretion. In other words, we need to know our readers before we write these expressions.

Examples

I don't know what *you all* are doing (Southern).
I am not *sure* vs. I am not *for sure* (Missourian).
get *together with* vs. get *with (*Missourian*)*.
wait *for* Jan vs. wait *on* Jan (Missourian).
wait *for* the vegetables vs. wait *on* the vegetables.

Punctuation can also affect formality. The punctuation in the following sentences progresses from the most formal to least.

Examples

I read all day; there was not anything else to do.
I read all day: there wasn't anything else to do.
Because there wasn't anything else to do, I read all day.
I read all day. There wasn't anything else to do.
I read all day--there wasn't anything else to do.

■ Quality of Diction: Word or Phrase Choice

Examples

Negative
Dear Mrs. Brown:

We regret that we cannot comply with your request to withdraw $50 from your savings account and send you a check for that amount. You must fill out and sign the enclosed withdrawal slip, and mail it back with your passbook. It is a strict rule of the bank that no withdrawals be made without presentation of the passbook.

Very truly yours,

Positive
Dear Clara Brown:

We would be glad to send you a check for the $50 that you wish to withdraw from your savings account. Please sign the enclosed slip and return it to us with your passbook, and your check will be sent immediately.

Very truly yours,

Negative: The report is not ready.
Positive: The report will be ready tomorrow.

Negative: We will not accept orders after January 31.
Positive: Orders will be accepted until January 31.

Negative: We have not received your payment.
Positive: Payment is due.

Negative: You failed to provide the following information:
Positive: May we please have the following information:

Negative: Do not disregard the rules.
Positive: Please observe the rules.

Harsh
Take care of this matter at once.

Softer
May we ask you to take care of this matter at once?
Will you please take care of this matter quickly?
Please take care of this matter as soon as possible.
We appreciate your writing us so promptly.
Please let us know when the tests are completed.

Tactful. Considerate writers make frequent use of the language associated with courtesy. As I already noted, language that considers others takes into account their point of view and tries to cultivate rapport. It is the kind of writing that helps readers preserve and enhance the good opinion they have of themselves. For example, some demands can be softened if they are phrased as questions. This *question of courtesy*, as the device is called, however, is usually followed by a period.

Crude
Customer Service:

What kind of outfit are you running anyway? We place a simple order six weeks ago, and we don't even get an acknowledgment. Now you send us a bill, but we've never seen the software. This kind of service we can do without. If you can't get the stuff to us, just cancel our order and we'll go elsewhere--permanently.

Very truly yours,

Courteous
Customer Service:

On March 24 we requested ten additional software tapes and the necessary documentation. Although we received no acknowledgment, we understood that it could take some time to process the order, and we waited patiently. Today we received a bill from you to cover the cost of these materials, but we still don't have them.

We are certain that you sent the order and that it has not yet arrived. In any case, we'd appreciate your looking into the matter and letting us know where things stand. Of course, we'll hold up payment of your bill until we receive the order.

Very truly yours,

Insulting
TO: All Employees

FROM: Samuel Edwards, General Manager

SUBJECT: Abuse of Copiers

It has recently been brought to my attention that many of the people who are employed by this company have taken advantage of their positions by availing themselves of the copiers. More specifically, these machines are being used for other than company business. Obviously, such practice is contrary to company policy and must cease and desist immediately. I wish therefore, to inform all concerned--those who have abused policy or will be abusing it--that their behavior cannot and will not be tolerated. Accordingly, anyone in the future who is unable to control himself will have his employment terminated.

If there are any questions about company policy, please feel free to contact this office.

Respectful
TO: All Employees

FROM: Samuel Edwards, General Manager

SUBJECT: Use of Copiers

We are revamping our policy on the use of copiers for personal matters. In the past we have not encouraged personnel to use them for such purposes because of the costs involved. But we also recognize, perhaps belatedly, that we can solve the problem if each of us pays for what he or she takes. We are therefore putting these copiers on a pay-as-you-go basis. The details are simple enough....

Natural. Professional material is usually most effective when it sounds human--as if writers were speaking personally to readers. One way to achieve this effect is to use the personal pronouns *you, I,* and *we,* as I noted above. Using these pronouns establishes better rapport with readers than those constructions used either to avoid responsibility or to appear erudite. The *it is believed* passive construction may be chosen over the *we believe* construction when there is good reason to be indirect or vague about the identity of the *believer.* But in neutral or positive communications, the natural use of personal pronouns is appropriate, if not desirable.

Impersonal: This is to acknowledge
Personal: I have received

Impersonal: It has come to my attention
Personal: I received

Impersonal: Reference is made to your letter of
Personal: We refer to your letter of

Impersonal: There is enclosed a memorandum
Personal: I am enclosing a memorandum

Impersonal: It is suggested that this department be supplied with
Personal: We suggest that you send us

Impersonal: It is the understanding of this writer that
Personal: I understand that

Impersonal: Notice has been taken of
Personal: We noted that

Jargon/Buzz Words. Another way to humanize writing is to avoid jargon. The term jargon refers to words that are considered hackneyed, trite, or cliched. Buzz words, doublespeak, or gobbledygook are other forms of jargon--terms that only "insiders" know, thereby mystifying the language for everyone else.[10] Writing is so much a part of professional life and some ideas are repeated so often that the temptation to use jargon is overpowering. It starts off fresh in particular professions. But it becomes offensive when it leaves its speciality and moves out into general currency where its purposes and meaning are abused. Certain common business expressions pass successfully into circulation (see Janis article in Appendix Part 1). While one person's jargon may in fact be another's critical terminology or *mot juste*, mindless, hackneyed writing is bad in any kind of writing. But it is particularly off-putting in neutral or personal communications. Therefore, at its best, jargon functions as an intellectual shorthand for specialists in the field. At its worst, it is confusing and alienating.

A perfect example is the law. At great moments in our lives legal documents are usually around: licenses, certificates, contracts, leases. As a result, some of us tend to imitate lawyers whenever we are writing something important or formal. Research reports, even simple, short memos, are often filled with legalese, the attempt to sound like an official document.

We need to caution our students against overusing standard phrases of politeness like stewardess talk or awkward and insincere language. Insincerity is a form of discourtesy because it reflects a low opinion writers have of readers. A printed message, an advertisement, for example, sometimes succeeds despite its dishonesty because it is impersonal and addressed to a large audience, many of whom may not be very discriminating. Otherwise, insincerity can be an affront. We may think that without these expressions, we cannot write professionally. We can. But if we feel we must use some of this language, we should treat it with the same skepticism that we treat any unnatural or stuffy expressions.

Note: Determine what your critical power wants, the person ultimately responsible for your communication. Your professor, your chair, your boss should be apprised of what you are doing. If the jargon and technical pedantry you have worked hard to eliminate is exactly what your professor or supervisor sees as professional and technical expertise, he or she will be mortified about what you have done--because you don't sound professional any more. Address any objections or misconceptions early on.

Examples of Jargon

acknowledge receipt of
aforesaid
answering yours of
as captioned above
as per
as regards
at an early date
at hand
at the present writing
attached hereto
attached herewith
attached please find
awaiting your reply
beg to advise
bring to our attention
concerning yours of
contents noted
deem
due to the fact
duly noted
hand you herewith
hereby advise
herewith enclose
in due course
we trust
anything in our power
it's been a pleasure

in receipt of
in reference to
in the amount of
in the matter of
of the above date
per
please be advised
please remit
pursuant to
re
reference your
regarding same
regret to advise
said (the said product)
take pleasure in
take the liberty to
take the occasion to
thank you in advance
heretofore
under advisement
under separate cover
at this writing
we remain
in conclusion would state
in connection therewith
comfort and convenience
would advise, would appear

Buzz words rapidly become empty because everyone is writing or saying them. Nowadays that would include:

interface
deal with
strategize

foregrounding
leverage
finalization

framework
humongous
orientate
impactfully
analyzation
forward-thinking
incentivize
prioritize
generalizability
viable
communications environment
effectivity
inputs
valorize
doable

Jargon	**Natural**
Kindly advise	Please let us know
As per your request	As you asked
We deem it advisable	We believe it is advisable
The said matter	This matter
Reference your job number	According to your job number
We have your letter and thank you for same	Thank you for your letter
At your earliest convenience	As soon as you can
Your favor of April 6	Your letter of April 6
Please indicate thereon	Please indicate on it
Receipt is acknowledged	We have received
Your letter of recent date	Your recent letter
Pending receipt of	Until we receive
Hoping to hear from you, we remain	We look forward to hearing from you

■ Idioms With or Without Particles

As most of us know, *cliches* are the threadbare or dead metaphors of our language. They are mindless bits of jargon, proverbial statements, slang, and other language that have ceased being meaningful. *Idioms*, on the other hand, are the very glue of our language. The combined effect of verbs or adjectives with particular particles (prepositions) makes for strong professional writing.

Examples

1. To break: a promise, a resolution, one's word, a contract; the law, the peace, the silence; one's leg, arm, etc.; a seal, a link; contact with someone.
2. To bring: an action/an accusation against someone; someone to justice; a letter/lecture to a close.
3. To grant: a favor, a request, permission.
4. To award: a contract.
5. An attempt: fails, succeeds, peters out.
6. Complications: set in, arise.

7. A contract: is drawn up, is signed, expires.
8. An opportunity: presents itself, arises.
9. Acceptable to: Is this arrangement acceptable to you?
10. Accompanied by: The president was accompanied by his cabinet.
11. According to: The house was built according to the owner's plan.
12. Accountable to: someone for something. It is not pleasant to be accountable to one's boss for everything one says and does.
13. Accountable for: someone or something. Responsible for that person or thing.
14. Burdened with: He is burdened with a heavy schedule.
15. Compatible with: It would not be compatible with the public interest to reduce the strength of the police force.
16. To exercise: an option, judgment.
17. To exert: authority over.
18. Informed of: Please keep me informed of your movements.
19. Liable for: responsible for.
20. Liable to something: likely to do something.
21. Preferable to: A week's holiday is preferable to a week's work.
22. Proficient in: A good secretary must be proficient in shorthand and bookkeeping.
23. Profitable for: The new partnership should be profitable for business.
24. To secure: approval for.
25. Subject to: The plan is subject to approval from the management.
26. Sufficient for: This money should be sufficient for the purpose.
27. Cut back (on) something: reduce (production). If we don't cut back on expenditures, the company will be faced with serious difficulties. On account of the decrease in trade, it will be necessary to cut production back.
28. To draw up: come to a stop (a vehicle); prepare a legal document. The ambulance drew up in front of the building. The office drew up the contract.
29. To take something on: To take on a responsibility. Is the firm taking on any more assistants? No more workers are being taken on at this time. To accept as an opponent. Will you take me on for a game of racketball?
30. To take something over: from someone: To come into control or possession of. Henry's taken over the running of the family firm from his father. There's been a take-over in Hungary.
31. To think something out: To work out by careful reasoning. We would start by thinking out a satisfactory plan. His arguments had obviously been well thought out.

■ Sexist Language

The professional world should be portrayed without discrimination by gender. Workers' titles should be described in ways that indicate the job may be filled by a member of either sex. Titles ending in the word *man* or *woman* can be made genderless by replacing those endings with *person* or *individual* or by using different wording. The endings of *master* or *mistress* have been dropped. Feminine endings such as *ette*, *ess*, and *ine*, which often imply something false, inferior, smaller, or less important, have been eliminated, and a single title is used for both sexes.

Examples

Gender-related titles	**Neutral titles**
animal husband	animal breeder
authoress	author
businessman/businesswoman	executive, manager
cameraman	camera operator
chairman/chairwoman	chair, presiding officer, moderator, coordinator, director
cleaning lady, maid	housekeeper, maintenance crew
congressman	member of Congress or representative, or Congressman Green and Congresswoman Holtzman
delivery man, boy	deliverer
floorman, floorlady	floor supervisor
girl Friday	executive or administrative assistant, clerk, secretary
headmaster	head, principal
housewife	homemaker, consumer
insurance man	insurance agent
lineman (telephone)	line installer, repairer
mailman	mail or letter carrier
newsman	reporter
office boy or girl	office helper or apprentice
patrolman, policeman	police officer
paymaster	pay agent
pressman	press operator
repairman	repairer
salesman, saleslady	salesperson, salesclerk, sales representative
spokesman	official representative, public affairs director, publicist
statesman	diplomat, leader, public servant
stockboy	stockkeeper
steward, stewardess	flight attendant
manpower	human energy, man and woman power, manufactured, work force,
every man	every person
mankind	humanity, people
man's achievements	human achievements
man-made	artificial, synthetic
forefathers	ancestors, forebears

Non-Sexist Alternatives (in no certain order)

adults
classes of
common humanity
community
contemporaries
families of
personalities
society
students (pupil, children)
citizens
individuals
joint workers
member of
human beings
persons
populace
supervisors
humanity
nationals
people
groups
women and men
personnel
residents
tenants

Alternative Letter Salutations

Dear Store Owner:
Dear Regional Directors:
Dear Consumers:
Dear M.L. Johnson:
Dear Customers:
Dear Vice President Barnes:
Dear Friends:
Dear Client:
Dear Club Members:
Attention: Order Department
Attention: Customer Relations/Service Department

Gender Parity in Written References

Imbalanced: Berman and Alice McNamara voiced the strongest objections.
Equivalent : Berman and McNamara voiced the strongest objections.

Imbalanced: The program will be conducted by John Frazer and Ms. Joanne Carne.
Equivalent : The program will be conducted by John Frazer and Joanne Carne *or* Mr. John Frazer and Ms. Joanne Carne.

Gender Parity in Pronouns

Using singular pronouns in academic or professional can sometimes cause problems that suggest sex discrimination. For example: Every worker is expected to remain at *his* desk until 5 p.m. We can avoid the sexist pronouns by using plurals throughout the sentence and by eliminating the offending pronoun or by judiciously using his or her. Simply replacing *his* with *their* in the above example and replacing *worker* with *workers* are grammatically correct options.

Sex-Related Pronoun: After each panelist has spoken, he will answer questions.
Neutral Use: After the panelists have spoken, they will answer questions.

Sex-Related Pronoun: It is imperative that each employee feels he is treated fairly.
Neutral Use: It is imperative that all employees feel treated fairly.

Sex-Related Pronoun: Everyone in the room should open his manual.
Neutral Use: Everyone in the room should open his or her manual.

Sex-Related Pronoun: While driving, a driver must carry his license.
Neutral Use: While driving, a driver must carry a license.

Sex-Related Pronouns: The average worker drives his car to work.
Neutral Use: The average worker drives a car to work.

USAGE, GRAMMAR, AND PUNCTUATION TRENDS

(see also notes on sentences, punctuation, abbreviations, and numbers in Appendix Part 1)

Although no single individual has the last word on current changes in our language, here is an informal list of the shifts that I see:

■ Usage

1. Unless individuals indicate a preference for Miss, Mrs., and Ms., these **courtesy titles** are often replaced by full first and last names. Men's names are treated similarly. (Special titles are excluded here [Chancellor, Dr., President, The Honorable]).
2. The rules for **split infinitives** are more relaxed. Split infinitives should be avoided unless common currency makes particular cases acceptable (e.g., To *really* believe in...; To *actually* have it...; Software has the ability to *instantly* access the operating system; to *better* understand everyday life).
3. A sentence **fragment** is acceptable and sometimes encouraged for emphasis (e.g., Which is to say, no one.), providing readers understand that writers know what they are doing.
4. Sentences may start with: or, and, because, but, so. They should be used sparingly with readers who know that writers are not functional illiterates when they do.
5. The **personal pronouns** *I* and *we* are now visible in professional communication. Management realizes that it is a powerful way of humanizing bureaucracies.
6. **Contractions** are acceptable, often preferred--for the same reason. While purists might prefer the expanded form of a verb phrase, majors should check the professional journals, books, papers in their disciplines. Knowing their audience and the conventions of a particular disciplinary format should guide the formality of the work.

7. **Prepositions** are acceptable at the ends of sentences (e.g., The survey indicates where stockholders come from.). Otherwise we will get something like the infamous Churchill statement: This is a situation up with which I will not put. Or its polar opposite: What are you bringing me that book that I don't want to be read to out of in for?
8. **Idioms** that introduce too many particles should be avoided. Instead, if possible, find a word that embeds the particle (e.g., Fortunately, this exclusion has been *accounted for by/compensated for by* the objectives and exercises used in the second round assessment. Instead, try: offset by, rectified by, or set right by. The plan can be conceived *of as* a model. Instead, try: The plan can be *envisioned as or considered* a model.).
9. Words used as examples of words are **italicized**. However, many *foreign terms* are no longer italicized because they have come into common currency. Italics, bold, or underlining for emphasis should be used sparingly or they lose their strength.
10. "I will meet with Gary and *myself*" should be recast as "Gary and me." The word, *myself,* is used reflexively: I, *myself,* will go.
11. I appreciate it *if you would* write me, should be recast as, I appreciate *your* writing to me.
12. He helped her decide. A *to* is often added: He helped her *to* decide.
13. *As* we are leaving tomorrow should instead, say: *Because* we are leaving tomorrow.
14. *Alot* is spelled *a lot.*
15. *Alright* is spelled *all right.*
16. Replace the reason *why* with the reason *that.*
17. *Further* is an intangible estimate of distance: Let's go into the matter further. *Farther* is a measurable distance: Please move the car *farther* down the road.
18. References to humans do not take *that*, but *who* or *whom*. Instead of: I am a teacher, one *that* children look up to, say: I am a teacher, one *whom* children....

■ Grammar

1. Although highly visible, cutting off word endings is incorrect: *Canned* vegetables *instead of can* vegetables; *Oversized* load instead of *oversize* load; *Released* time instead of *release* time; Fast *paced* world instead of fast *pace* world; Yesterday I *asked* him, instead of, Yesterday I *ask* him).
2. The term *that* leads to an essential (restrictive) clause and takes no commas. *Which* leads to a nonessential (nonrestrictive) clause and takes commas: e.g., The house *that* Jack built, *which* was made of wood, burned down last night.
3. The use of *who* or *whom* in the following sentences depends on the position of the surrounding subject and verb (e.g., From experience, I chose scorers *whom* I knew grade fairly. From experience, I chose scorers I know *who* grade fairly.).
4. In *either-or* or *neither-nor* constructions in which one term is plural, the pronoun following should agree with the nearest term. For example, Neither Jack nor his roommates finished *their* work. And the verb should agree with its nearest subject: Neither Jack nor his roommates *are* going.

5. Jack knows better *than* she (if than, she knows *something* is implied).
   Jack knows better *than her (about the cake mix).*
   I like Tom *as much as* her (if *as much as I like her* is implied).
   I like Tom *as much as* she (if *as much as she likes Tom* is implied).
6. The report, together with three proposals, *was* found the day after the meeting.
   The sum and substance of the memo *is* that all people should contribute.
   Twenty years *is* a long time to wait for a promotion.
   A number of *candidates* for the position *are* interviewing well.
   Poverty is one of the major *forces* that *encourage*....
   Smith is one of the *councilmen* who *oppose* the plan....
   Smith is the only *one* of the councilmen who *opposes* the plan....

■ Punctuation

1. Fewer commas are in use. When in doubt, leave it out. When in, we should have a clear reason for its use that we can defend.
   - A. Short opening phrases need no commas (e.g., In an interview Britton said that...).
   - B. Some connectives embedded in verb phrases need no commas (Our need was therefore to discuss).
   - C. Commas in dates appear after the day and the year (On April 10, 1984, we left.) but this may vary.
   - D. No commas are used between the state and zip code and after the zip code (...at St. Louis, MO 63121 where we...).
   - E. In sentences listing three or more items in seriation, commas are used between the last two items unless those last two terms are especially linked, e.g., _______, ________, and ___________. The Associated Press chooses not to because of space constraints (________, __________ and ________).
   - F. Unlike the tradition, two short compound sentences do not need a comma between them.
2. More and more abbreviations are written without periods (TV, am, pm, MO, IBM). Students should verify spelling in a current dictionary.
3. Except for use by the literati, the semi-colon is losing ground as a special form of terminal punctuation to the plain but always understandable period.
4. Formal ordered lists may take this form:

   ______________;
   ______________;
   ______________; and
   ______________.
5. In general commas and periods are placed within quotation marks. Question marks, exclamation points, semi-colons, and colons are placed outside them. Exceptions: If a

quotation ends with an exclamation point or a question mark and also ends the sentence, it is punctuated this way: !" or ?" When a word or term is quoted inside a sentence, the last quotation mark remains outside the punctuation mark (e.g., He asked: Are you sure you meant that kind of "apron"? Arguing against "extremism," the senator praised the President: "He is a man of moderation."). Note the correct use of the question and quotation marks (e.g., The Senator attacked "extremism": He said that "extremists could start a nuclear war"; and, in answer to a question, he called Smith an "extremist." He asked: "Did Mary call?" Did he say: "Mary called"?).

6. Using the parentheses over the dash is a matter of formality. Both surround additional information; however, the dash is more informal in setting off the additional information.

CORRECTNESS

■ **Misplaced Modifiers** (see Syntax section in Appendix Part 1)

Phrases qualifying other words should be placed as close as possible to those words. Keep related thoughts together and keep subjects close to verbs.

Confusing: John threatened to quit often.
Clear: John often threatened to quit.

Confusing: We towed the truck down the street with a flat tire.
Clear: We towed the truck with a flat tire down the street.

Confusing: We offered to paint the office last night.
Clear: Last night, he offered to paint the office.

Confusing: The candidate was hired by Smith who had recently graduated from college.
Clear: The candidate, who had recently graduated from college, was hired by Smith.

Confusing: The possibility of sending the report to a remote printer exists.
Clear: We may be able to send the report to a remote printer.

Confusing: Working hard, the day passed quickly.
Clear: Working hard, I thought the day passed quickly.

Confusing: Dean Gemmett passed along Tom Kallen's letter to you for me to respond to.
Clear: Dean Gemmett passed along Tom Kallen's letter for my response.

Confusing: The cost of work which was accomplished in the assembly section before the last inspection date would be hard to determine due to faulty records in May.

Clear: Since the assembly section lost its records for June, we cannot determine the cost of work done before the last inspection date.

Confusing: Except for motivation, in between, other members of the evaluation system, such as arousal, emotion, mood, preference, attitude, belief, and value, may be plotted by their varying contribution of cognition and emotion.

Clear: In between, other members of the evaluation system may be plotted by their varying contribution of cognition and emotion, such as arousal, feeling, mood, preference, attitude, belief, and value.

Confusing: No one told me years ago that therapy--just now reappearing in paradoxical ways (You say it, then disclaim it.) after years of invisibility--was off limits.

Clear: No one told me that therapy was off limits. After years of invisibility, it is just now reappearing but in a paradoxical way. (You say it. Then you disclaim it.)

✍ *Exercises*

1. Please set up an appointment through Susan for us to talk.
2. We purchased the desk from a dealer with a roll top.
3. I should like to apply for your advertised position to teach part-time in the nineteenth century.
4. Twenty-eight additional compounds were evaluated in multisite trials at 6 to 10 locations throughout the soybean growing areas on commonly grown varieties.
5. ...baker who torments the couple whose child has been run over about the birthday cake they had ordered.

   Ted Solotaroff, Harper & Row
6. Consider courses on the development and care of children in Special Education and in Social Work for a nine-hour specialty.

   Dean of Graduate School, UM-St. Louis
7. Just as interesting, however, are Sakharov's remarks not long before he died about Gorbachev.

   Democrat & Chronicle
8. The focus of evaluation of the teaching methodology for both of the sociologists was on the objective demonstration that students had new knowledge and a more subjective evaluation of students' work with that knowledge.
9. According to the figures in the diagram, the numbers show that people when they are working by being employed in the capacity of a secretary get the most money and the best benefits.

10. James De Mille, Professor of Rhetoric at Dalhousie University between 1864 and 1880, summarized the nineteenth-century Anglo-Canadian perception of how the study of rhetoric served the overall education of the individual and the welfare society in these comments:

College English

11. The school hopes to introduce computer-assisted instruction in the future, and is engaged in cooperative planning to the effect with the Nursing School at UMKC.

Dean of the Graduate School, UM-St. Louis

12. Students required to take 102 and 112 may satisfy both requirements in one semester this fall.
13. Separate the date of the month from the year with a comma.

■ Dangling Modifiers

Make sure that verbs refer logically to subjects.

Confusing: While working in New York, his staff was left on its own.
Clear: While working in New York, he left his staff on its own.

Examples

1. Looking out the window, the horse came around the corner.
2. Taking our seats, the meeting began.
3. After considering the proposal for hours, it was rejected by the president.
4. By following the instructions, your new blender can be easily assembled.
5. After purchasing the contacts, the one thing they do not have is convenience.
6. Born in 1841 as a slave near Nashville, Tennessee, both of his parents died by the time he was six years old.

George P. Rawick, UM-St. Louis

7. Having spent time in other metropolitan areas of our nation, it seems to me that Rochester has a great deal to offer, although it is confronted with an element of negative perception among those who choose not to enjoy its many attractions.

Floyd. F. Amann Democrat & Chronicle

8. Living in Greece for a while several years ago, one of my favorite pastimes was listening to arguments in the taverns over whether Odysseus Elytis or Yannis Ritsos was "the poet of our time."

Sam Hamill, American Poetry Review

■ Confusions in Agreement

Pronouns should agree with the nouns they stand for, pointing clearly to the terms they refer to. Students should avoid using terms like former and latter where antecedents may be unclear.

Confusing:	The president met with the vice president while touring the plant.
Clear:	While the president was touring the plant, he met with the vice president.
Confusing:	The partnership between Jones and Smith ended when he lost the client.
Clear:	The partnership between Jones and Smith ended when Jones lost the client.
Confusing:	Please remove the labels from the file drawers and wipe them.
Clear:	Please wipe the file drawers and remove the labels.

Examples

1. The specimens were examined with different microscopes under ultra-violet light at several wave lengths. Although *they* were selected at random, several similarities were observed.
2. John Smith raped a woman while on parole with a transmitter strapped to his ankle. In order to know how he did *it*, you have to know how *it* works.

CNN

■ Lapses in Parallel Structure

When ideas are of equal importance functionally, their relationship is best expressed in parallel structure, that is, in the same grammatical form or pattern (nouns, verbals, etc.). We say, for example, *The flag is red, white, and blue*, rather than *The flag is red, white, and also has blue in it.* Parallel structure simplifies and organizes information.

Thus if a present procedure is examined for ease of control, effective performance, and cost, any procedure with which it is compared should be examined for the same features presented in the same grammatical form and in the same order. In larger units of prose, parallel structure should be evident in the uniformity of headings and subheadings. One efficient way to determine this is to check for the presence of **F**or **A**nd **N**or **B**ut **O**r **Y**et **S**o **(FANBOYS)**. Often (but not always) one of those terms introduces parallel structure.

Not Parallel: These antennas are not only required for long-range radar, but also for trans-horizon communications, telemetry tracking, and to provide other early-warning alert applications.

These antennas are
not only required for long-range radar (verb phrase),
but also trans-horizon communications (noun phrase),
telemetry tracking (noun phrase), and to provide early-warning alert applications (infinitive phrase).

Parallel: These antennas are required *not only* for long-range radar, *but also* for trans-horizon communications, telemetry tracking, and other early-warning alert applications.

These antennas are required
not only for long-range radar (noun phrase),
but also for trans-horizon communications (noun phrase),
telemetry tracking (noun phrase), and
other early-warning alert applications (noun phrase).

Not Parallel: After working hard at the office and she spends an hour on the train, she arrives home exhausted.
Parallel: After working hard at the office and spending an hour on the train, she arrives home exhausted.

Not Parallel: She is intelligent, hardworking, and is ambitious.
Parallel: She is intelligent, hard-working, and ambitious.

Not Parallel: Running takes more energy than to walk.
Parallel: Running takes more energy than walking.

Not Parallel: I don't know where he lives, what he does, or his name.
Parallel: I don't know where he lives, what he does, or who he is/what his name is.

Examples

1. "Gaining Access to and the Nature and Use of Writing and Reading Resources Across Kindergarten Through Grade 8" (Title)
David Bloome, American Educational Research Association
2. In part, the disagreement has concerned the relationship of images to behavior and about the ability of a positivist social science to graph that relationship.
Catherine A. Rogers, Georgia Review

3. His piecemeal account of the Spanish Civil War lets him indulge his passion for nostalgia and social injustice as well as creating a chance to sympathize with a loser in public.

   Peter Wolfe, UM-St. Louis English Dept., *St. Louis Globe*

4. Susan has a full schedule between playing, studying, teaching, and an occasional lap in the pool. However, she's never too busy to exclude speaking and giving concerts at local churches.

   Gayle R. McIntosh, Stagebill, St. Louis, MO

5. To avoid over-centralization and because data processing is too costly, individual colleges keep track of retests.

   National Testing Network In Writing

PART 2

CHAPTER 5
PROCESSES OF INQUIRY

The second-handedness of the learned world is the secret of its mediocrity.
Alfred North Whitehead

Naming things is not knowing them but a first step toward it.
Anon

Stereotyping is a bad case of hardening of the categories.
Anon

If you can't explain it, you haven't done it.
Anon

Traditionally, empirical evidence is the wellspring of knowledge. This remains the basis, of course, for the hard sciences, but clearly includes the social sciences, the law, and so on. In the psychological sciences, the case study or single subject approach was popularized by the baby biographers of the 18th and 19th century and deepened by the work of Freud, Erikson, and Piaget from which each derived a comprehensive theory of human development. By the mid-twentieth century Bloom's[1] taxonomy of cognitive processes emerged. This system is one of the most widely used paradigms of inquiry in education and is based on a hierarchy of thought processes (see also accompanying questions in Appendix Part 2).

Each cognitive process requires more complex thinking than the one preceding it and so builds on or incorporates the previous types of thought in order to move to "higher" levels. This in itself suggests a learning and teaching strategy: In the early stages of a topic, emphasis is placed on lower, more basic thinking processes; as these are mastered, students move up the hierarchy toward more complex ways of dealing with the material. It is, however, important for us to remain flexible when incorporating these skills into disciplinary activities.

Thinking Levels	Cognitive Requirement	Thinking Skills
Low	Memory/Knowledge	Recognizing and recalling specific facts or general concepts in their original form

	Comprehension	Translating information in students' own words; grasping the meaning of material; interpreting it in context
	Application	Extrapolating, using information in new, concrete situations; discovering relationships between facts, concepts, definitions, etc.
	Analysis	Breaking down a problem consciously, using defined forms of thinking; identifying component parts of a set of facts or a concept, with relationships (contrasts, differences, etc.) among the parts made explicit and organization understood; higher intellectual level than comprehension and application because the relationships require an understanding of both content and structure of the material
	Synthesis	Creative thinking; assembling elements to form a new whole
	Evaluation	Judging its value based on predetermined criteria, model, or theory; conscious value judgments are based on clearly defined criteria (This stage recruits all the stages before it.)
High	Reasoning	Inferring its soundness based on inductive, deductive, analogical reasoning

■ Identification of Relationships and Patterns

- causal
- hierarchical
- temporal
- spatial
- correlational
- metaphorical

Discursive Patterns of Inquiry

1. From vocal speech and unuttered speech to private writing to public writing.
2. From dialogues and monologues to letters and diaries to first-person narratives to third-person narratives to essays of generalization to essays of logical and theoretical manipulation.
3. From an intimate to a remote audience.
4. From immediate subjects within a narrow time-space frame to subjects remote in time and space.
5. From recording (drama) to reporting (narrative) to generalizing (exposition) to theorizing (argumentation).
6. From present to past to potential.
7. From perception to memory to reasoning.
8. From chronology to analogy to tautology.

Discursive Patterns of Inquiry Based on Speaker-Audience Relationships[2]

Thinking to oneself (Interior Dialogue)	Inner verbalization
Speaking to another person face to face	Outer verbalization
Writing to a known party (Correspondence)	Informal writing
Writing to a mass, anonymous audience	Formal writing (publication) Public narrative Public generalization

Although there are several equally justifiable ways to make knowledge (see Invention Methods in Chapter 2 and Sequencing Writing Assignments in Chapter 10), my inclination is to start with what we witness first hand and that means sensory experience.

THE OBSERVATION PROCESS/THE LIVED EXPERIENCE[3]

Heuristics for acquiring knowledge are typically embedded in a process of inquiry that begins *sensorily*. When we collect data without preconceptions, we are, for all intents and purposes, *sensing*; when we arrange them and admit them into consciousness at the lowest level, we are *perceiving*; and when we name them and draw conclusions about their patterns and meaning, we are *thinking*. Sensing and perceiving are sometimes confused in popular usage; both refer to a process of experiencing information through the senses from the world outside or inside ourselves. However, when we sense directly, we do not yet have the words to identify or explain what is happening to us because in order to find words, we have to call them to mind, to think--at least theoretically.

In principle, then, sensing comes before perceiving. Our senses are limited both in range and capacity and are affected by such factors as selective focus and mental preoccupations. Sensations have to be held in consciousness long enough to be interpreted by perception. When we perceive something, we catch and hold this something in consciousness until we can grasp its meaning. Perceiving also means to be directly aware of our world by actively exploring, selecting, organizing, and interpreting what is experienced by our senses.[4] We select sensations to pay attention to. We organize them. We interpret what these designs mean, which leads to different perceptions. When we perceive something, we use memory to synthesize all our information in preparation for giving it a name. The advantage of experience combined with a precise vocabulary is that it enables us to observe better, to sense more, to take a greater interest in what we sense, and to communicate it more accurately.[5]

Thinking then critically improves perception by forcing us to consider differences in background, interests, and needs and the problems of overlooking, misunderstanding, or stereotyping.

Academic disciplines have in common processes called "inquiry." Each discipline puts before its students a particular set of objects or materials to be worked with at a raw or unrefined level: archival materials, election returns, census data, rats in a maze, the dialogues of Plato, paintings or statues, a Hopi rain dance. Relative to these various materials or objects, different patterns of thought emerge. So too, different writing skills come into play at the most basic level of interpretive work, and these are developed in a particular context of inquiry.

In addition, every discipline directs its inquiry toward some characteristic, overarching set of questions: political scientists may inquire into the relationship between political activity and some notion of "the just and the good"; literary students inquire into how texts create meaning; and so on. Such inquiries begin with a gap or problem (a paradox, a contradiction, an anomaly, or an improbability) that provides both an occasion and a space for inquiry.[6]

Look at the assumptions of one paradigm of concept development and inquiry[7]:

1. We take in data from our senses.
2. We perceive in our data patterns of similarities, differences, and identities that suggest categories of order. We decide what belongs with what (see the Defining and Classifying section).
3. We draw comparisons in our data and from our memories about what we have sensed.
4. We apply logical and psychological standards and reasoning to the material.
5. We imagine explanations and meanings concerning the data.

6. We assess what is missing and not known, and devise strategies for obtaining more data and/or explanations.
7. We formulate ideas and words to communicate our discoveries to others.
8. We check for errors in our information, our language, and our form of communication.

In short, the basic skills that make up the first experiences used to process information are[8]:

1. Classification (grouping)
2. Seriation (ordering)
3. Correspondence (matching)
4. Observation (use of all the senses)

■ Sequence for General Empirical Inquiry[9]

1. Observation
2. Description (statements about particulars)
3. Comparison and/or contrast the particulars
4. Generalizations (statements about commonalities)
5. Definitions (statements about commonalities and differences involving the use of criteria)
6. Definitions (hypotheses, statements of explanations)

■ Alternative Sequence

1. Observation and description
2. Personal experience
3. Reporting
4. Process analysis
5. Critical reading
6. Analysis of ideas
7. Comparison of ideas
8. Persuasion of ideas
9. Research on ideas

Sample Sequence in Brockport's WAC Faculty Seminars

1. Naturalistic Observation
2. Definition and Classification
3. Term Paper/Critical Essay/Research (see Chapters 6 and 7)
    A. Controlled Research/ Rhetorical Analysis

4. Research Proposal/Research Project[10]
    - i. The Lived Experience
    - ii. Background/Literature Review
    - iii. Design of Study/Definitions
    - iv. Methods
    - v. Statistical Treatment (if any)
    - vi. Outcomes
    - vii. Implications, etc.
5. Position Paper/ Philosophical Statement (see Chapter 8)

Learners need to be able to[11]

- inquire;
- compare;
- select on the basis of comparing;
- try out solutions;
- see what the outcomes are; and
- change their mind through seeing how various viewpoints are arrived at--right or wrong.

First-hand experience generates detailed records of a person or a place or some material thing that does not require a treatment or intervention. It takes different forms--simulations, direct observation, experiments, demonstrations, so-called open-ended or structured (close-ended) interviews, background research, and information furnished by other observers. Standardized formats for collecting and processing such data allow investigators to make direct comparisons.

Empirical evidence yields important information about phenomena as they occur in the natural habitat of the real world. And every discipline has what it identifies as its primary sources, e.g., a geological formation, customer service in the state department of finance, a depressed neighborhood, a public policy hammered out at a hearing, a case study of a hyperactive child. In literature it may be interviewing Susan Cheever, daughter of writer John Cheever or reading the unedited letters of Nadine Gordimer. In biology it may be studying zebra mussels or the proverbial frog. In engineering and business it may be observing bridge construction, flood damage, and may be called field work. In psychology it may be represented by a psychological evaluation for a neurologically impaired preschooler. The clinical method in a case study observes individuals or groups in their natural environment through certain activities that they normally undertake. A protocol enables observers to record behaviors and/or interactions. In ethnographic reports researchers closely observe an aspect of, say, working patterns or play patterns in a particular community. They visit a particular site several times, taking detailed field notes and then synthesizing their findings.

These naturalistic observations have their shortcomings: The validity of any conclusion depends on the accuracy of the observation. The extent of the ability to generalize from observations is sometimes questionable. For example, data on any two or more individuals may not be directly comparable even though identical questions are asked. At the receiving end, naturalistic observations also present some thorny interpretive problems. Because perception depends on subjective experience, observers routinely have preexisting biases that color their perspective. Because we depend on confirmation from others in searching for facts, we are also susceptible to distorting our perceptions as a result of social pressure. But even without those difficulties, some social scientists believe that the very act of observation actually colors it. In any event, it is usually worthwhile to alert students to the influence of an observer's frame of reference.

Because of these risks, direct observation is often combined with other techniques--standardized tests, performances, self-reports, and so on. Greater objectivity is also achieved through balance. For example, several interviews of a subject may be undertaken; studies of rodents may include a pet guinea pig, a Peruvian guinea pig, and a lab-raised guinea pig.

Observation is the quintessential way of checking facts. Here are some guiding principles: Observers should generally

- be disinterested and alert;
- be skilled at observing the sort of thing observed;
- have sensory equipment in good condition;
- use precise techniques;
- have no preconception about the way the observation must turn out;
- have good access and a satisfactory medium of observation; and
- make a report or record at the time of observation.[12]

In his classic extended definition semanticist Hayakawa[13] (see article in Appendix Part 2) identified the differences among the *report* (the observation), the *inference*, and the *judgment*.

The *report* is a basic symbolic act. It states what we see, hear, or feel. To arrive at a report we appeal to our five senses: to see, hear, feel (touch), taste, and smell, without adding explanation, interpretation, or evaluation. Reports address facts or information capable of being objectively demonstrated and verified through investigation. A fact is something known with certainty through experience, measurement, the testimony of witnesses, agreed-upon observations, records, or documentation. A fact is accepted or can be proven true. It is specific, referring to only one situation. Reports that relate events or state facts may not be analyzed as arguments.

A fact becomes a fact when we can get another source or person to agree that it corresponds to reality. For example, we agree on units of measure, what constitutes day or night. We trust a road sign or someone's directions. That someone is convicted of theft is a report because it is verifiable. According to Hayakawa, circumstances compel people to agree or nothing would get done. Life without reports would be impossible. By definition, reports exclude inferences and judgments.

Nonetheless, facts do not always correspond to reality. They depend on our socially agreed-upon interpretations of reality. Feelings (emotions) may be considered facts. Feelings about art, for example, offer clues to artists' intentions. Other ways of verifying statements or facts is to check the source for dependability (as in evaluating the credentials of a reputed authority) and/or an inference leading from acceptable grounds to the statement or information in question.

Inferences draw a conclusion on the basis of available facts or on the basis of other inferences. When we infer, we derive a result by imagining or reasoning from evidence. Inferences are made when all the facts are either not available or not yet determined. Statements that are not directly known or observed are made on the basis of the known. In fact, the whole point of reasoning is to determine the truth or falsity of propositions that we are *unable* to verify directly by sense perception.

The construct of inference may be divided into two main categories, necessary inference and nonnecessary inference, each of which is further subdividable. In necessary inference the conclusion must necessarily follow from the given, and that necessary inference is an integral part of the more complicated reasoning toward explanatory hypotheses, the syllogism. Roughly speaking, the nonnecessary inference is of three sorts: (1) that leading to generalizations of the instances, (2) that leading to explanatory hypotheses, and (3) that leading to value judgments (see below), with some overlap between them. We thus move from observation to interpretation, explanation (see Appendix Part 2), generalization, and judgment.

Facts and inferences are linked together through generalizations. Facts have little significance in themselves until generalizations or "laws" are derived from them. Generalizations tie information together into meaningful wholes. However, generalizing too soon, before we have gathered a sufficient number of facts, is hazardous; but this does not mean that we should not generalize at all. It simply means that we should learn how to draw generalizations that can be supported.[14]

Unless each inference is tested against its evidence, a series of inferences can also mislead us into flights of imagination, away from reliable knowledge. (By contrast, an assumption is taken as a given, without necessarily having any basis in data or conscious reasoning. An inference may be based on an assumption, just as an assumption may be based on an inference. See p. 197.)

But inferences attach no value on them. We make guesses, good or bad, carelessly or carefully. We infer wealth from clothing, jewelry, or a car. We infer a certain type of job from callouses on a person's hands. We infer anger based on the fact that persons are banging their shoe on a table or hitting a wall. We infer that a woman is drunk from seeing her car weave on the road. Inferences can build on inferences in chains of association--until we make judgments.

Judgments are expressions of individuals' approval or disapproval of ideas, events, persons, or objects. Judgments introduce an evaluation into a report or an inference based on certain criteria. But evaluations are not facts. Factual reports keep the distinction clear between facts and evaluations.

For example, a report cannot say this is a wonderful car. The report must say the car gets 75 miles to gallon. However, a judgment can. If we state that Jack lied and Tom is clever, the fact of those statements is an inference first and then a judgment. Through their connotations, many words report and judge simultaneously: for example, bureaucrat instead of congressman has pejorative connotations: tramp instead of homeless is a negative judgment; as is suckers came to buy rather than consumers purchased; that he sneaked in instead of walked in or entered quietly has a negative cast to it, and is thus both a report and a judgment.

■ Types of Evaluations[15]

1. **Simple generalizations**: Typically preceded by the words *all*, *no*, or *some*, so as to suggest a general truth.
2. **Judgments**: This is good. This is bad. This is right. This is wrong. This should be. This should not be.
3. **Personal taste or sentiments**: I like this; I don't like that.
4. **Advice**: You should do this; you should not do this.

Psychologists have determined three types of criteria that may be used as the basis for judgments: logical, perceptual, and affective.[16] The logical criteria rely heavily on weighing and evaluating evidence. Perceptual criteria may be used in judging figural or visual products such as symmetry, balance, simplicity, originality, esthetic value, and good form. Affective criteria are involved in moral and ethical evaluations and in determining the subjective, personal value, or utility of alternatives.

The most important question we can ask when introducing students to some form of naturalistic observation is: How can our students get as close as possible to the raw data of the field? The answers enable us to introduce to them the lived disciplinary experience.

✍ *Exercise: Psychology*

This is a report of preschooler Michael. Analyze and evaluate the following paragraph as a report, inference, or judgment.

> Michael is a preschooler who does not like to be away from home every morning. He comes reluctantly to nursery school, and the minute his mother leaves, begins to act aggressively. Sadly, he has no siblings to interact with at home, so he has not learned how to relate to other children. He is unhappy, bored, and doesn't even like the cookies at midmorning break. He doesn't respond to our gentle encouragement and might be better off at home with a sitter.

■ Naturalistic Observations in the Social Sciences

Example of a Student-Generated Outline

I. Getting Started
    A. Observations
        1. Objectively record details.
        2. Don't explain, interpret, or judge.
        3. Don't draw inferences until you have made an accurate and complete record of observations.
        4. Use strategies. (Pretend a classmate is blind. Tell him or her what you see.)
        5. Don't miss the obvious, but focus your objectives.
        6. Perform a frequency count of particular behaviors, incidences.
    B. Categorize information
        1. Organize a notebook in columns according to categories.
        2. Write in [chronological] logical order.
        3. Record everything--never too much.
        4. Don't edit while recording.
        5. Record something from each category during each observation session.
    C. Inferences
        1. Make inferences about data.
        2. Fit observations into theories required to explain them.
        3. Select explanations that best account for the observed behavior.
        4. Explain why some theories don't hold up.
II. First draft
    A. Primary task is to get ideas down.
    B. Write each category like it is its own paper.
    C. Ignore introduction temporarily.
    D. Review observation sheets for every relevant item.
    E. Read through categories to discover meaning.
    F. Write an introduction that presents the rationale for the paper.
III. Revising
    A. Write for your reader.
    B. Describe and summarize results and observations, what patterns you observed, what inferences you drew.
    C. Check the paper
        1. For using specialized language appropriately.
        2. For avoiding extended definitions.
IV. Conclusion
    A. Tie together disparate categories.
    B. Discuss implications of your observations and explanations.
V. Final draft should be a unified paper. General categories into which these details may be grouped:
    A. Clothing and appearance
    B. Typical surroundings
    C. Conversations
    D. Personal history
    E. Behaviors/Mannerisms

Examples of Student Case Studies (For weak example see Observation of Tommy in Appendix Part 2.)

Observation of My Cat

Abstract

The paper was based on observations of my cat's eating habits when dry and moist food was served. There were three categories: physical, social, and grooming.

The physical category concentrated on how much the cat ate, how often he went back for more food, and how long he ate at any particular time. Whiskey, the cat, spent more time eating moist food. He ate for four minutes when moist food was served. When dry food was served, he ate only four or five bites.

Socially, Whiskey purred and wanted to be petted more often when moist food was fed to him. He also was more eager when moist rather than dry food was served.

The grooming category consisted of the cat's cleaning habits after eating. It was observed that no grooming was done after eating dry food; however, he licked his face and paws for three minutes after eating moist food.

The interpretation was that Whiskey was more physical, social, and concerned with cleanliness when moist food was fed. On the other hand, there was little or no interest in these categories when dry food was served. The final interpretation was that it seemed Whiskey preferred moist food and knew when it would be served.

Full Report

We would expect a cat's eating habits to be the same at each feeding. A cat can learn, however, what type of food will be served at what feeding time, and will respond according to how well that type of food is enjoyed. I observed the eating habits of Whiskey, my orange and white tiger striped cat who is six years old. These observations took place in my apartment, particularly in the kitchen. I observed Whiskey for three, fifteen minute intervals and included both morning and evening eating patterns. The type of food, dry or moist, determined the cat's physical, social, and grooming habits.

Observations

Physical Activity

When dry cat food was placed in the cat's dish, Whiskey stood and looked at the food. He then took four or five small bites. While chewing, he dropped pieces of food on the kitchen floor. These particles were left there. Once the food had been chewed and swallowed, Whiskey walked five steps across the kitchen, away from his food and sat down in the dining room. He sat for a minute and then took eight steps into the living room. Whiskey then walked four steps to the front door. He lay down on his right side and meowed.

When moist, canned food was placed in the cat's dish, Whiskey started eating when the dish was placed on the floor. He stood directly in front of the dish and ate from the left side. Taking a piece of food in his mouth, he moved his head up and down three times while chewing. He then sat down and continued to eat but without moving his head up and down. He stayed at the dish eating first from the left and then the right side for four minutes. After eating, he walked into the bedroom and sat for a minute. He then returned to the kitchen and resumed eating.

Whiskey started to eat from the left side of the dish again. He sniffed the food and occasionally licked it rather than ate it.

Social Behavior

Prior to being fed dry food, Whiskey walked up to the couch and rubbed his body across my legs. He also sat on his hind paws, looked at me, and meowed. When I walked into the kitchen he walked a step behind me. Whiskey then sat on his hind legs in the middle of the kitchen and watched as I poured food and clean water into his dish.

Prior to being fed moist food, Whiskey jumped up on the couch, walked across it, and lay down on his left side in my lap. Using his front paws, he took my right hand and placed it on his chest. When petted, he purred. Twice he walked across the couch and pushed his head under my right hand. Again when petted, he purred. When I walked to the kitchen, Whiskey ran in front of me. He rubbed from left to right and back again across my legs while I filled his food and water dish.

Grooming

After eating moist food, Whiskey licked his mouth first, then his front left paw, next his front right paw, and then his mouth again. He also licked a front paw and rubbed it up and down on his face. He licked himself for three minutes after eating moist food. He did not lick himself after eating dry food.

Interpretation

The cat was more interested in taking care of physical needs when dry food was served than social ones. He wanted a minimal amount of attention before being fed. He casually walked to the kitchen and waited patiently while his food was being prepared. He seemed only slightly interested in the food and found no reason to clean himself after eating. Whiskey seemed to know that he was being fed dry food.

And he seemed to know when he would be fed moist food so he showed equal interest in taking care of all of these needs. He wanted more attention before being fed moist food, possibly having learned that the more attention he demanded, the sooner he would be fed. While moist food was being prepared, Whiskey did not just sit and wait for the dish to be placed on the floor. Instead, he rubbed against my legs several times. After eating moist food, he cleaned and groomed himself. While I can't be sure, it seems that after a satisfying meal, Whiskey needed to clean himself, thus spending several minutes licking his face, mouth, and paws. Possibly the grooming was done because he was both content and satisfied after eating moist food.

Whether it is instinct or learned knowledge, Whiskey appears to know what type of food he will be fed and reacts accordingly. Although when dry food was served he showed little interest in social interaction or eating, when moist food was served he became a social, hungry cat that enjoyed being clean.

Psychological Evaluation **Kerry Brand**
Tri-County Clinic, Indiana **February 1, 1995**

Name: Henry DeSoto ID# T5340003
D.O.B.: 5/28/76
Age: 19
Examiner:
Supervisor:
Tests Administered:

Wechsler Adult Intelligence Scale-Revised (WAIS-R)
Thematic Apperception Test (TAT)
Rorschach
Bender Gestalt Test
House-Tree-Person (H-T-P)
Kinetic Family Drawing (KFD)
Sentence Completion Test
Telephone Interview with High School
Interview with Therapist

Background

Henry DeSoto was first placed in the TriState/Mackie Home in October 1990 after his mother, Maura De Soto, refused to continue to care for him. Reports indicate that Henry's father, Ponce, left her when she was pregnant with Henry, attempted to raise him alone, but she could not support him financially. As a result, at the age of two, Henry was sent to live with this material grandparents in the Philippines until the age of eight. Reports indicate that he did not see his mother during these years. Maura remarried in 1984. Henry has a half-brother and a half-sister.

At the age of eight, Henry was brought back to the United States to live with his mother after she had remarried. Henry has not seen his grandmother since his return and his grandfather died in 1992. When Henry returned to his mother's care he began to have problems with stealing, lying, running away, physical destruction of property, and physical aggression toward family members. Henry became unmanageable at home and he was hospitalized for the above mentioned behaviors and for depression in April 1990 at Westfield Hospital. While Henry was in the hospital, his mother stated that she wanted to terminate parental rights. When Henry was to be discharged from the hospital, his mother refused to pick him up and DCFS (Dept. of Children and Family Services) took temporary custody of him. Henry was placed in various shelters before being placed at Mount Mary Hall. On October 7, 1990, DCFS was granted guardianship of Henry and his mother gave up her parental rights.

Henry currently lives in the Mackie home. Susan Mackie stated that Henry is usually a "good natured kid" who is "not doing the best" presently. She reported that in mid January he got caught with some marijuana at school, was suspended, and had to undergo a drug assessment. In October, Henry was involved with the theft and arson of a car on which court status/action is pending. Susan Mackie stated that she has been worried about Henry's choice of friends. She is concerned that he is socializing with youth who have drug and gang involvement.

The Mackies left their positions as family teachers in September and then returned about 3 months later. Susan Mackie suggested that the transition to new family teachers was difficult for Henry. She indicated that he views the Mackies as a "substitute mother and father." Henry stated that he felt bad when the Mackies left but when they returned they seemed less understanding, and the house rules seemed more rigid.

Henry has a close relationship with his material aunt and uncle, and he visits them regularly. They have suggested that Henry come to live with them, but Henry has stated that he would rather stay at Mary Mount.

Bob Alpert from the Wilton School reports that Henry is a quiet child who "hates school." He has seen a decline in Henry's academic performance since his freshman year. During his first year in high school Henry was doing his school work consistently, was passing his classes, and was on the wrestling team. However, for the past two years Henry has been failing classes. Bob Alpert stated that Henry lacks motivation regarding his school work. Last year, he was requesting to go to Jamaica School because he knew that he would be less challenged there, but he was told that he could not be transferred because he was not a behavioral problem.

When Henry was asked about his school performance he stated that it is "terrible" and that he has "gotten lazy." He suggested that there is "too much stuff going on in the home" and he has not felt like doing his work. Henry stated that the youth in the home have been fighting and "going off" and that this "upsets everyone." Henry expressed feeling of remorse about the auto theft and stated that it was "kind of stupid" and that he "doesn't know why they took it."

As for Henry's strengths, Albert indicated that Henry does well with "hands-on" activities. He likes to draw and figure things out mechanically. Henry also worked in the forest preserve over the summer and he was reported to be "one of the better workers hired." Henry has a history of "tagging" which is a non-gang related activity that involves writing graffiti onto property. Henry takes much pride in his skill as a "tagger."

Socially, Henry tends to keep to himself, but he has a few close friends.

Henry was treated by Dr. Allison Taylor until June of 1993 when he was transferred to Dr. Sabrina Wills. Therapeutic goals have been to decrease Henry's depressive symptoms and his acting out behaviors. Henry is guarded, and he has a difficult time broaching subjects. Dr. Wills reported that she needs to introduce various topics to engage Henry. However, it also has been observed that Henry often appears not to want to leave at the end of sessions because he will sit in silence and not get up from his chair.

Reason for Referral

Henry was referred for testing as part of the standard evaluation procedure at Mary Mount. An assessment of his current intellectual and emotional functioning was requested to assist in forming treatment plans and recommendations for future living arrangements.

Behavioral Observations

Henry is a 19-year-old Filipino youth who appeared to be his stated age. He is small in stature and he has acne on his face. Henry came casually dressed, and his hygiene and grooming were adequate. Testing was completed in two sessions.

On approach, Henry was cooperative and polite. His affect was constricted and his mood seemed depressed. He appeared shy and emotionally guarded. Henry spoke softly and he mumbled. This examiner often had to ask him to repeat what he said. Though he responded appropriately to questions, he engaged in very little spontaneous conversation. Henry's responses were usually brief, and he did not seem to want to struggle with a response if he was not certain of the answer. He often needed prompting to provide answers.

Henry seemed to have some difficulty relating interpersonally, but he shook this examiner's hand before leaving after the first testing session.

Intellectual Functioning
WAIS-R Results

Verbal Subtests		**Performance Subtests**	
Information	6	Picture Completion	7
Similarities	6	Picture Arrangement	7
Arithmetic	6	Block Design	11
Vocabulary	5	Object Assembly	10
Comprehension	5	Digit Symbol	12
		Digit Span	10
Verbal IQ	84	*Performance IQ*	99

Full Scale IQ 90

Henry obtained a full scale IQ of 90 which places his intellectual functioning in the average range. His verbal IQ of 84 places his verbal reasoning skills in the low average range. Henry's performance IQ of 99 places his skills of non-verbal reasoning in the average range.

A relative comparison of Henry's verbal subtest scores suggests that he has the ability to use rote memory and immediate auditory memory.. Significantly below the norm was Henry's verbal comprehension, word knowledge, social judgment, and factual knowledge. His ability to separate essential from non-essential details and his use of abstract and concrete reasoning are also poor. Henry's numerical reasoning is weak and his attentional skills are better developed than his skills of concentration.

Henry's symbol associative skills and his visual-motor dexterity are strong relative to other scores. Below the norm are Henry's ability to plan, attend to details, and interpret social situations.

Henry's performance improves when he is faced with tasks that require both perceptual organization and visual-motor coordination. His abstract reasoning ability is better with non-verbal stimuli than with verbal materials.

Henry's Bender Gestalt results suggests that his level of perceptual development is commensurate with that of other 17-year-old youths. Henry had emotional scoring errors that included confused order and dashes for circles. These errors suggest that Henry can be impulsive.

Emotional Functioning

Henry is an affectively constricted and guarded youth. His primary means of coping with his feelings is by use of avoidance and withdrawal. Henry attempts to avoid dealing with his feelings because engaging in any introspective self-examination likely would be too frightening. Henry's history of acting out behaviors also suggest that he uses the physical discharge of his emotions as a way of coping.

Beneath Henry's emotionally guarded exterior is a depressed young man. He was abandoned at a young age by both his mother and his father. Henry feels rejected by his mother, and he has had an extremely conflictful relationship with her since their reunification when he was 8. He is extremely angry with her, but unconsciously, he wishes that she could provide nurturance for him. Henry is also angry with his father for being both physically and emotionally unavailable to him. He wishes that he could have a strong male figure to identify with. Henry also longs for a happy family and unconsciously, he wishes that he could "live happily ever after." At the same time Henry maintains the belief that in reality people are either non-existent or ineffectual.

Henry is a lonely youth who feels discontented with his home environment. He has been disappointed by primary caretakers and this has caused him to maintain an interpersonally guarded and mistrustful stance toward people. He harbors the belief that relationships will be unfulfilling , and so it is pointless to become emotionally invested in people. Henry also lacks empathy, and he tends to disregard others in thought and behavior.

Henry is somewhat self-absorbed, and he has a wish to be recognized by adults and by peers. He has some exhibitionistic qualities, and at times, he enjoys being the center of attention. These traits seem to be a defense against strong underlying feelings of inadequacy and low self-esteem.

Henry did not demonstrate evidence of psychosis or a formal thought disorder. He has good reality testing, and he has the ability to see things as others do. Henry has the intellectual facility to organize his world, but feelings of depression presently are impairing his ability to use his cognitive resources effectively. More specifically, Henry's low self-esteem and his lack of motivation are interfering with his ability to achieve. Currently, Henry is an underachiever who tends to take the easiest cognitive-perceptual way out when faced with challenging tasks. These factors appear to be making a significant impact on his poor school performance.

As for Henry's strengths, this examiner found him to be pleasant and cooperative during the testing. In addition, Henry is of normal intelligence, and he has the ability to learn a variety of skills and trades if he can overcome his motivational problems.

Recommendations

1. Henry needs a stable residential placement where he can stay for the remainder of his adolescence. This placement should be safe, consistent, well-structured, and provide opportunities for self-enhancing experiences. It should provide Henry with the skills necessary for future independent living.

2. Continued individual psychotherapy is recommended. Treatment goals should include: reducing Henry's depressive symptoms and his lack of motivation, increasing his self-esteem, and helping him to ventilate angry feelings appropriately.

Psychological Consultant
Diagnostic Extern
Supervisor

■ Tips for Students: The Art of Observation

In the first-hand experience, you practice the art of observation. You learn to pay attention to detail.

1. Focus. Use devices such as the four Cs: Characterization, Change, Contrast, and Consequences; who, what, where, when, why, how; question-answer/problem-solution; Burke's Pentad [act, agent, agency, etc.)
2. Always go for more rather than less data to start with.
3. For descriptive writing, look for quality, detail, and comparison.
4. If you are worried that you may confuse facts with opinions, make one list for observations and one for inferences.
5. Use the past tense in describing behaviors or test results, unless you are mentioning evidence that is ongoing or typical.
6. As guides for organizing information, use the Spheres of Experience categories as subheads (see p. 161) such as economic, social, moral, physical, fiscal, historical, etc. But don't build your subheads too early, since information may be arranged in various ways.
7. Include quantitative data along with behavioral descriptions. Statistics, test battery results, and other quantitative data may be submitted in tabular form. Tables are optional. But if you use them, they must be interpreted and discussed. Whether or not to interpret such data within each subcategory or all together at the end varies with the discipline.
8. It may be permissible in the reportorial section of a paper to use such expressions as: *I observed* or *I asked*, but not *I thought* or *I believe*.

■ **Abbreviated Format from the Sciences** (see also Chapters 9 and 10 on Designing and Sequencing Assignments)

1. Observe
2. Question
3. Hypothesize
4. Develop a method to test hypothesis
5. Collect data
6. Analyze them
7. Conclude

■ Sample Inquiry Assignments and Formats

Arts and Performance

Dance[17]

Write separate reports of your observations of three distinctly different types of dance classes: Technique and Theory (Modern Dance), Ballet, African Dance, Folk Dance, Ballroom Dance, or Jazz.

Include the following in your report:

1. Name and level of class; name of instructor
2. Student body: age, sex, general education students, dance majors, predominant cultural group, etc.
3. Pre-class behaviors
4. Type of accompaniment
5. The class itself:
   - A. How does the instructor begin the class: introduction, formation, warmup?
   - B. What is the progression of activity in terms of difficulty, speed, dynamics, longer movement combinations (from stationary to locomotor, from floor to standing, from individual to partners to group)?
   - C. What is the vocabulary used?
   - D. How much teacher demonstration occurs?
   - E. What is the physical location of students and teacher?
   - F. How does the teacher correct students?
   - G. How do students react?
   - H. What is your perception of the emotional climate, student-teacher-accompanist relationship?
   - I. Do any students stand out? Why?
   - J. How does the class end?
   - K. How are you affected as an observer?

Physical Education and Sport[18]

Observe three young children (ages 2-6 years) in an active but natural play environment. For each child describe the execution of at least three fundamental movement patterns. According to Gallahue, a fundamental movement pattern allows us to "move in a variety of ways to a given stimulus." Fundamental movement patterns are the motor skills of early childhood; examples include running, hopping, and jumping. Apply these descriptions to Gallahue's model of motor development and analyze the model for its ability to explain differences in motor behavior among children. The report should include ages and gender of the children; descriptions of at least three fundamental movement patterns for each child; and a discussion of the utility of the Gallahue model based on your observations. Include in your report a discussion of the applicability of the model to field-based observation as well as its ability to predict accurately the movement patterns of the children based on their age.

Letters and Sciences

The Natural Sciences: General Prompt [19]

Select a particular natural object, condition, or phenomenon (in biology, chemistry, physics, geology, astronomy, etc.) about which there is current interest and on which scientific perspective has changed. (Let's call that topic X.) Your aim is to inform an interested and educated audience about what has led to the most current thinking about X, behavior toward X, or observation of X within one scientific community. You may wish to focus instead on how X itself has changed, rather than on how scientists' perception of X has changed. For example, you might want to select an animal species and consider changing attitudes about animal behavior ("How has scientific thinking about gorilla intelligence changed?") or changing behavior toward an endangered species ("How have scientists' efforts helped to prevent the extinction of the peregrine falcon?"). You might want to examine current medical practice or thought as it relates to a particular illness or therapy ("What progress has medical science made in the treatment of herpes?").

Your purpose is **not** to get involved in issues, although your topic **may** be controversial. Neither will you focus on competing claims about X or on the personalities who have made them. You will clearly, accurately, and objectively convey to your readers what has led up to the perspective on X today. Beyond defining what X is, you want to show **how** the treatment of X, the understanding of X, the attitude toward X, or the behavior toward X **has changed**. The time span that you want to consider will vary, depending on your topic.

The Social Sciences: General Prompt[20]

This report combines observation, personal narration, and academic discourse.

Given below are four statements [citations reprinted only] included by social scientists about the meaning and place of ritual and celebration in communal and individual life. First observe and record your [Thanksgiving] celebration. Note the sequence of events, the roles assigned to each participant, and the significance of the day and its events in the lives of the participants (how it differs from other days). Then relate this written data to any one or more of the statements below. Your data can either support or contradict the statements. Do not change your observations. Rather, use them in order to analyze the socio-psychological or cultural meaning of your celebration.

Translation of Jean Cazenueve, *Sociologie du rite* (Presses universitaires de France 1971, 30-31).

Hennig Cohen and Tristram Peter Coffin, *The Folklore of American Holidays* (Gale, 1987, 331).

Konrad Z. Lorenz. "Ritualization in the Psycho-Social Evolution of Human Culture" (*Philosophical Transactions of the Royal Society of London* 251 [1966]:276).

John McManus, "Ritual and Human Social Cognition" in *The Spectrum of Ritual: A Biogenetic Structural Analysis* (Ed. Eugene G. d'Aquili, et al., Columbia UP, 1979, 245).

African-American Studies[21]

1. Observe and describe a Sunday service in your local Black church; pay close attention to and describe fully the preacher, the audience, the preacher-audience interaction, the focus of the sermon, and the after-church activities.
2. Write a report of your observations with particular emphasis on the description of the preacher, audience, preacher-audience interaction, the major focus of the sermon, and the after-church activities.
3. From your observations and readings, describe the functions of the Black church in your community, evaluate and substantiate that the Black church continues to be a socialization agent. Support your thesis with documented support from your readings. Provide formal references at the end of your essay.

Anthropology: Ethnographic Analysis Guide

Use this guide to analyze your ethnography. Use the back and additional sheets as necessary.

Author:
Title:
Name of Group Under Study:
Location of Group:

I. Environment and Ecology: where they live; environmental contexts for culture; how they perceive and interact with in the environment
  A. Natural/Social Environment: locate the group in an atlas
    1. General features
    2. Resources
    3. Limitations
    4. Seasonal changes
    5. Essential resources
    6. Changes in the natural environment due to modernization or contact with other groups
  B. Social environment: whom they interact with and why
    1. Insiders
    2. Outsiders
  C. Cultural environment: artificial, created environment
  D. Symbolic environment: how they perceive their environment
  E. Use of environment: how they make the best use of the marginal environment
II. Technical order: how people make a living in their environment
  A. Traditional subsistence base: how they obtain food and other necessities of life
    1. Describe traditional subsistence base, technology, etc.
  B. Modern subsistence base: non-traditional ways of making a living
  C. Tools and technology: what people use to make a living
  D. Division of Labor: who does what, and why do they do it that way
  E. Economics: distribution of food, access to resources, etc.
  F. Advantages and disadvantages of traditional subsistence base
  G. Changes in technology: economy associated with modernization
III. Social order: how social life is structured, organized, and regulated
  A. Basic social units:
    1. Basis for membership in groups
    2. Functions of groups
      a. Economic functions
        (1) Social functions
    3. Settlements: where groups reside or spend time
    4. Seasonal changes in settlements
    5. Leadership in groups
  B. Kinship: how they trace relationships; functions of kin groups
    1. How they trace kinship
      a. Similarities to American kinship
      b. Differences from American kinship
    2. Relating to kin
      a. Obligations
      b. Etiquette
      c. Types of kin
      d. Age

3. Kin terms: what kin call one another (You don't need to know actual terms. You should understand why they lump certain kin together under the same term and use separate terms for different types of kin. Compare their system with yours.)
    a. Same generation
    b. Parents' and children's generation
4. Marriage
    a. Whom one may and may not marry
    b. Economic functions
    c. Political functions
    d. Early marriage
    e. Sex roles
        (1) Male
        (2) Female
    f. Divorce
    g. Polygamy/polyandry

C. Socialization: how people become adults, join groups, etc.
    1. Role of family
    2. Role of non-kin
    3. Rites of passage (initiation)

D. Politics and law: how bands interact, settle disputes, etc.
    1. Basic legal concepts
        a. Basic rights
        b. Obligations to group members
        c. Obligations to inlaws
        d. Obligations to outsiders
    2. Disputes
        a. Causes of disputes
        b. Settling disputes within the group
        c. Settling disputes between groups
        d. Settling disputes with outsiders
        e. Lethal vs. non-lethal dispute settlement
        f. Role of courts
    3. Preventing conflicts
    4. Political involvement with larger national society

IV. Moral order: values, religion, concepts of right and wrong
    A. Values: central values underlying culture
    B. Religion: how people interact with and use the spiritual world
        1. Gods, spirits, and ghosts
        2. Origin myths
        3. Health and illness (if related to religion)
            a. Causes of illness
            b. Curing rituals
            c. Contact with Western healing
        4. Types and functions of rituals

V. Conceptual order: how people perceive their world and the things and individuals in it
    A. Perceptions of environment
    B. Perceptions of themselves
    C. Perceptions of outsiders

VI. Modernization and change: effects of innovations on the environment and technical, social, moral, and conceptual orders

VII. Future prospects: how effectively do you think people will survive modernization and change in the long run? Be specific

Biology

Students studying the unusual characteristics of slime mold are asked to design experiments to answer questions they have generated about the behavior of the mold.

Biology: Field Observation of Eastern Gray Squirrel Behavior (*Sciurus Carolinensis*)[22]

The objectives of this assignment are to provide students with experience in:

1. observing animal behavior in the field;
2. recording data;
3. classifying and defining behaviors;
4. distinguishing between observations and inferences based upon observations; and
5. summarizing behavioral observations in a clear, concise manner.

PROCEDURE:

Your efforts will focus on the behavior of the eastern gray squirrel (*Sciurus carolinensis*). Along with a partner, you will observe an individual squirrel for two one-hour periods. During the first hour you should concentrate on observing what the animal does and recording pertinent descriptive information. You might ask, "What is pertinent information?" I will leave this for you to figure out, although your field notes should include information on the kinds of behaviors that you observe and the situations in which these behaviors occur. Can you think of additional, useful types of behavioral and/or environmental information that might be worth noting?

Work with your partner to use observations from your first period to come up with categories, or types, of squirrel behavior. These categories should be easily distinguishable. The categories should be narrow enough to be meaningful, but broad enough to prevent the division of behavior into too many types. For example, "awake" would be a meaningless category because it would include almost everything the squirrel does. "Running along small tree limbs" would not be useful because it would represent only one of many types of moving, in addition to all of the other things that a squirrel does. Also, categories should be discrete; in other words, categories should be unambiguous. For example, the two categories "running" and "in tree" are not discrete because the squirrel could be running in a tree; where would you put the observation? In general, I would suggest avoiding position categories, such as "tree" or "ground."

After constructing a data sheet, return to the field, and spend one hour quantifying the frequency with which "your" squirrel performs the previously identified behaviors. You will need to work with your partner on this; each person will collect data **independently** during the same time period! You will use a "focal animal" method for quantifying behavior, in which observations are collected at 30-second intervals, for a total of 120 observations. At each sampling time, you will record what the squirrel is doing **at that exact moment** (not during the preceding 29 seconds!).

REQUIREMENTS:

Based upon the results of your observations, you are expected to produce:

1. A two-page typed report summarizing your field observations. The main body of the report should not include summary statistics; rather, it should be a **clearly organized description** of what "your" squirrel did. Be sure to include a strong topic sentence. This portion of the report, which should be entitled "Observations" should avoid any inferences concerning **why** the squirrel behaved as it did. Concentrate on what you saw! If you want to make any inferences regarding the "whys" of the behaviors, place them in a second, short section entitled "Inferences." This part of your assignment will be graded on organization, clarity, and conciseness.
2. Short (one to two sentences), functional definitions for each behavioral category used in your table (not shown). These definitions should be discussed and agreed upon by partners. They should be clear and concise, so that a novice could read them and obtain a basic understanding of what squirrels do. Be careful not to include reference to the squirrel's presumed internal state (such as "when the squirrel is hungry" or "when the squirrel is afraid") in your definitions.
3. A table comparing your focal animal data for each behavioral category defined in number 2 to your partner's data. The table should be neat, effectively organized, concise, and clearly titled. Refer to Table 3.4 in Drickamer, et al., for an example of the proper format. Note the use of an explanatory legend. Be sure that the data you present are clear and that they include appropriate units. A short comparison of your results relative to your partner's should accompany the table. (see pp. 28-31 in Drickamer, et al., for relevant material on design features in animal behavior studies.)

Composition and Literature[23]

Attend the reading by Barbara Kingsolver at Tower Fine Arts on Thursday, February 16th, at 8:00 p.m. Following the reading write a report describing *one* of the following:

1. The audience
2. The author
3. The stage set
4. The performance
5. The story

Rely on your senses to help you gather observable, verifiable data. During the reading, take simple notes. Write a report in which you describe these observable details.

Evaluation: Your work will be evaluated on its

1. objectivity (your ability to report details without opinion);
2. clarity; and
3. completeness.

Spanish Phonology[24]

Objectives:
To help future Spanish teachers become aware of phonological interference of native English speakers of Spanish sounds and its articulatory and pedagogical implications. To observe, record, and report on the pronunciation of the Spanish sound /**t**/ by native speakers of English.

Operational Reference:
The Spanish sound /**t**/ is pronounced with the tip of the tongue touching the back of the upper teeth **(apico-dental).** The English sound /**t**/ is pronounced with the tongue further back, on the alveolar ridge **(apico-alveolar).** The puff of air that characterizes the English /**t**/ **(aspirated sound)** is not produced when pronouncing the Spanish /**t**/ **(unaspirated sound).**

Hypothesis:
Native speakers of English when beginning to learn Spanish have a tendency to pronounce the Spanish sound /**t**/ with the articulatory characteristics of the English sound /**t**/. Through their first hand observation, students have an opportunity to test this hypothesis and report its confirmation or denial.

Instructions:
Observe, record, and report on the pronunciation by 10 native speakers of English enrolled in beginning Spanish courses of the Spanish terms listed below. Five of the 10 students must be female. Five must be enrolled in Beginning Spanish I and five in Beginning Spanish II.

> *Tango, Tengo, Tingo, Tomo, Tema, Teme, Tanto, Tinta, Tinto,Tonto, Taco, Toca, Toco, Atento, Tata, Tito.*
>
> **Groups of words:**
>
> *Tu Tio Tito Te Toca Tu Taco Tu Tamal Te Tienta*
> *La Tia Tina Te Trae Tamales Tono Tumba La Timba*

The report must focus on the interference of English pronunciation, if any, in the pronunciation of the Spanish sound /**t**/. The report must include correlations relative to the gender of subjects and to the level of the courses in which the subjects are enrolled.

History[25]

For this exercise assume you are an author engaged in an original investigation of an aspect of Wisconsin Indian history. Evaluate the collections described below to determine which you can use and the limitations. These collections are not the *only* sources. Your task is to determine the contribution of these documents.

Select one of the following topics:

1. The Return of the Winnebago Indians to Wisconsin in the Half-Century Following the 1832 Treaty with the United States
2. Indian Everyday Life and Tribal Government in Northeastern Wisconsin during the Nineteenth Century
3. The Response of Wisconsin Indians to the "Sioux Uprising" in Minnesota, 1862-63

Review the "descriptions/abstracts" of document collections below (at least two collections per topic). Go to the Area Research Center and search the collections for at least five relevant items (individual letters, diaries, or laws). Describe each relevant item, including any limitations of each source, biases of the author, physical or temporal distance from the event described. Then detail the facts and interpretations which the sources yield.

Your grade is based on the

1. appropriateness of your documents;
2. identification of limitations;
3. plausibility of the facts and your interpretations; and
4. accuracy of your documentation.

Collections
EC SC 35 Lucy Hastings' Letters (1856-1863)
GB SC 53 Diary of Captain John Archiquette (1868-1874)
State Archives Series 133 Executive Records Indian Affairs 1849-1862
Wis.Mss. HP Declaration of Rights and Frame of Government of Stockbridge Indians 1834-1852

Mathematics: Modern Algebra[26]

Investigate several of the groups Z_n^*. Include at least two values of n of each of the following types:

A. PRIME numbers n
B. POWERS OF PRIMES n, for example 8 (= 2^3) or 81 (= 3^4)
C. n's that are PRODUCTS OF TWO DISTINCT PRIMES, for example, 15 (=3.5)
D. n's that are PRODUCTS OF THREE DISTINCT PRIMES

In your investigations, focus on these properties of Z_n^*:

A. The ORDERS of its ELEMENTS
B. Whether or not the group is CYCLIC

Write a summary of your observations about the groups in two or three paragraphs. If you use a calculator or computer, describe how you used it, including a list of any programs you wrote. Then write an additional paragraph or two in which you make conjectures based on your data. Each conjecture should be supported by your examples.

Political Science: Public Policy[27]

Based on the following facts, instructors design an essay prompt:

1. The Town Council where you live has proposed building a toxic waste facility in a sparsely populated section of town.
2. The Mayor has said that because the present site is outdated, if the facility is not built, the town will have to send its waste to a distant landfill at an increased cost, which will raise property taxes.
3. You live on the other side of town, although your sister can see the site from her kitchen window.

4. People living near a similar site have reported recurring problems with odors.
5. Because other municipalities will use the site, the state will pay the entire cost of the facility.
6. Construction of the site will provide over 200 jobs.
7. Environmentalists suggest that reducing the use of toxic materials and recycling could eliminate the need for the facility.
8. Farmland would be lost to construct the facility.
9. Only two small farms would have to be purchased for the facility.
10. Long-term studies have shown that no illnesses are positively linked to similar landfills.
11. There is an elementary school one mile to the east.
12. If other towns use the facility, it might generate enough revenue to reduce taxes.
13. The fruit-packing plant in town has just announced it is closing, putting over 400 people out of work.
14. A survey done in a town with a similar 10-year-old facility showed over 65% of the population viewed the landfill positively.
15. There is a stream running next to the proposed site.
16. The population of the town is decreasing as jobs are eliminated.
17. Trucks carrying toxic waste will have to drive through town to reach the facility.

Psychology

In the social sciences, observation is not only an acceptable but also a central form of data collection. Observation describes but is often laced with narration and other means of developing the subject. It is usually neutral in language and tone, though that may vary by purpose.

Case studies detail descriptions of one or more individuals and draw conclusions by analyzing the cases. Typically included are family background, socioeconomic status, education or work history, health records, self descriptions of significant life events, performances on psychological or other instruments.

Purpose: To explain the behavior of some thing, person, animal, phenomena in a controlled observation.

Procedure:

1. Decide what behaviors to observe.
2. Set up an observation schedule: how much time is appropriate: 3 hours of observation: 4, 15- minute periods at the same time each day over 1 week, 1 month, etc.
3. Record these observations objectively and in detail.
4. Locate patterns.
5. Group observations into categories based on similarities, naming each using the Spheres of Experience, such as social, personal, economic, political, moral, physical, managerial, and so on.
6. Order them the way you would were you writing a full paper, making sure you know why your arrangement is more effective than any others.
7. Interpret and discuss patterns or trends characterizing the behavior.
8. Apply theoretical concepts to categories of observations for the purpose of explaining them, in relation to those social scientific principles or concepts they represent.

Sociology[28]

The objective of this exercise is to learn the premises of functionalist theory. To be more precise, the assignment reinforces and deepens the understanding of functionalist theory gained through more usual lecture/discussion methods.

Observe the sales floor of a Wal-Mart for at least one hour. Write an essay in which you identify

1. the components of the sales-floor social system;
2. the contributions each of this components make to the operation of the system;
3. any "boundary-maintenance" mechanisms;
4. any source of "strain" in the sales-floor social system;
5. any mechanisms that facilitate "moving equilibrium" in the sales floor social system; and
6. any other phenomena that, in the interest of functionalist theory, might be relevant to understanding the social organization of a Wal-Mart sales floor, and explain why that phenomenon or those phenomena are important.

Professions

Business (Organizational Behavior): Non-Participant Observation at a Business Meeting[29]

1. Determine what business meetings are taking place on campus (Finance or Accounting Club) or in the community (a non-profit, hospital food bank, church vestry board meeting, etc.).
2. Obtain permission to attend. On the request form include your name, organization's name, date, purpose of attending, and assurance that what you hear is confidential. (You can offer to leave during sensitive moments.)
3. Attend the meeting. Record by name who attends. Obtain copies of documents, but as a non-participant observer, try not to alter the group dynamics by interacting with participants.
4. Record conversation and information, who said what, when, and how. Keep all interpretations out of the field notes.
5. Thank the directors for permitting you to attend. Offer to send a copy of your report. Reassure them regarding confidentiality.
6. Type up your notes.
7. Prepare an interpretive document that integrates the theory of group dynamics with what you have observed.
8. Include any definition of terms: Roberts Rules of Order, Implicit/Explicit Leadership, Group Dynamics, etc.
9. Formulate *five* recommendations to improve the working dynamics among members. Format them as follows:

Problem:	Observed lack of willingness to participate of all group members.
Solution:	Ask each person to offer to agree or disagree.
Benefits:	Solution contributes to consensual decision-making. It assures that each member has an equal voice in principle though not always in practice (e.g., power politics).
Drawbacks:	Those with genuinely nothing to say may be pressed to be overly negative or critical. It is time consuming.

10. Propose a plan for presenting this information to the group.

11. Summarize your observations. Interpret your notes, and integrate your perceptions with theoretical notions on group dynamics, group decision making, and formal group process.

Counselor Education: Counseling Practicum[30]

Purpose: To learn case management techniques and to practice communicating your impressions about a client.

In agencies in which you will work you will be required to produce a case report. It should provide readers with a concise summary of your interactions with a client in therapy.

Audience: Another therapist who takes on the client at a later date; second, another agency; third, a court of law. Therefore, it is the client's right of privilege, not the therapist's. Don't put anything in your case report that you would not be willing to say in court. Be sure to distinguish between your own thoughts and ideas and those of the client.

Requirements:
1. A brief description of the presenting problem.
2. The course of therapy. How did therapy progress from the first session to this point?
3. Your reactions to your client and to the therapeutic process. How did you feel about therapy with this client? Was it threatening, boring, exciting? Did it move slowly, quickly?
4. What are your hypotheses about the future for this client?

Criteria for Evaluation:
1. Does your report provide a clear summary of the sessions and your conception of the client? Not only the problem but how the client presented him or herself?
2. Would the next therapist have an idea of what to try next or what to avoid?

Health Science: Nutritional Assessment[31]

Although like other health professionals, nutritionists use statistics, they don't always add up to the accuracy of the clinical examination in determining a patient's nutritional status.

Your assignment is to evaluate a patient's nutritional status by observing and recording clinical signs. Use terms that clearly describe what you see. For example, when describing the condition of the lips, adjectives such as scaly, swollen, dry, discolored, or rough convey a picture of what you may see.

Observe and record the following: general appearance, weight, posture, muscles, GI function, hair, skin, face and neck, lips, mouth, gums, tongue, teeth, eyes, nails, legs, and skeleton.

Based on your observations as well as laboratory tests, make an overall assessment.

Nursing[32]

Describe to the non-nurse reader what it feels like to be a nurse. More specifically, describe a physical examination of a client. Pick a particular body system, e.g., heart, lungs/thorax, skin, and report all the details that a nurse sees, hears, and feels while actually examining a client.

Describe the process from start to finish, drawing each observation as accurately as possible. Try to allow the reader to see what the nurse sees, hear what the nurse hears, and feel what the nurse feels.

Grading Considerations:

1. The report is descriptive and detailed.
2. The report does not make inferences or judgments about what is wrong with the client or what particulars of the examination mean.
3. The report observes commonly accepted rules of grammar, syntax, spelling, etc.
4. The report is typewritten, double-spaced, and about 2-3 pages long.
5. The report is on time: 10 am, March 3rd.

Credit: The report is worth 10 points, which is 10% of the course grade. One credit is lost for each day the paper is late.

DEFINING AND CLASSIFYING

Definitions are statements telling what things, places, persons, and ideas mean. Definitions don't exist in nature. They are artificial constructs that we create. By telling what things are or what they stand for and how they relate to each other, definitions are an important tool for making and conveying knowledge. Because definitions lay the groundwork for all disciplines, as a rhetorical pattern of development they are a sine qua non component of most higher thought processes within them.[33]

Definitions help us agree as to what is included within the meaning of the term and what is excluded or outside the scope of the term. Definitions avoid the danger that different people have different ideas about what something refers to. They also reduce the danger of acquiring concepts, for example, as only vague ideas, without a clear understanding of the class of things they actually represent.

In the professional world individuals may need to understand what it means to draft a proposal, submit a progress report, recommend a procedure, or update software. In the academic world definitions may take on a whole other meaning. Subject area faculty often ask students to define as a way of testing mastery of knowledge in their field. Anthropologists want students to explain *carbon dating*. Educators ask for definitions of *mainstreaming* and *locus of control*. Theater majors need definitions of *box set, blocking, flat,* or *cyclorama*.[34] For history majors it is important to know that the *30 Years War* refers to a Western-European war, 1618-1648, between the Holy Roman Empire (with the Hapsburgs) and the German Protestant princes (allied with France).

In psychology *randomization* is a procedure that assures that each member of a population or universe has an equal probability of being selected.[35] *Emotional behavior* is correlated with changes in a range of response classes, e.g., if a pervasive stimulus simultaneously alters heart rate, respiration, blood pressure, defecation, and operant behavior maintained by reinforcement, it may be said to produce emotional behavior.[36] *Discrimination* means any difference in response to various stimuli; in a more restricted usage, it is a difference resulting from differential consequences of responding in the presence of different stimuli.[37]

In recreation and leisure[38] *recreation* is considered any active or passive activity in which a person chooses to participate that is self-enhancing and provides fun or enjoyment. Recreation and leisure is both the activity and the behavior associated with the activity. Further, *free time* refers to discretionary time: the abstract context or container in which participation in recreational activity is most likely to occur. Still another way to look at *leisure* is as an experiential state characterized by feelings of self-expression, self-actualization, or fulfillment through voluntary involvement in personally meaningful activities.

Business professionals[39] explain the meaning of such current buzz words as *benchmarking* as the process of comparing the cost and effectiveness of one institution's operations to those of other institutions. *Outsourcing* in business refers to hiring outside companies to perform specific tasks in the hope of getting better service at a lower cost. Last, *restructuring* means consolidating employees' jobs and duties, often as a result of downsizing. The number of employees is reduced through attrition or layoffs in order to operate within a target budget.

In sum, definitions

1. establish limits and sharpen the boundaries of an entity by generating criteria for membership in the larger class of which it is a part;
2. provide additional meaning for terms;
3. form networks of interrelated ideas. Things are not usually isolated, self-contained units but fit together into genus/species hierarchies;
4. give order and meaning to fundamental observations (object, event, action, location, time, attribute), complex events, and phenomena by providing a theoretical context for them; and
5. condense knowledge about things, providing a summary statement, highlight, or key point. Because definitions perform this service, a definition is valuable even, like the term *human*, when students already know what class of things it stands for.

■ **Audience** (see also Appendix Part 2)

Students are unaccustomed to matching definitions and particular audiences. Determining which terms to define and how to define them requires an understanding of readers, their backgrounds, and their expectations. Students should not confuse their audience by not defining terms. By the same token, they should not condescend to their readers by defining terms they are likely to know--unless they are instructors like us who are testing for knowledge.

Nontechnical readers need definitions of technical terms, but they will be confused if those terms are defined in equally technical language. An audience of foreigners unfamiliar with American laws and traditions would expect American writers to define for them the words *unconstitutional,* *Republican, Midwesterner,* and so forth. Most Americans, on the other hand, might become bored or annoyed if writers continually stopped to define or explain those terms. The term *prime number* would have to be defined for a nonspecialist audience but not for an audience of mathematicians. A technical audience, on the other hand, might be insulted if students defined common technical terms for them or sacrificed precision by expressing a technical concept in lay language. The word, *radioactive,* on the other hand, might be used in a general sense without a special definition for a lay audience. But it could require a definition for an audience of scientists who might need to know in exact technical terms what the writer meant by the word.

Audiences may be divided into four levels:

> **Level 1** groups are those who know less than college students, like public schoolers and children. Readers don't have to go to college to know what happened on November 22, 1963. A troop of Brownies and the readers of *The National Enquirer* may not.
>
> The **Level 2** audience is generally well-informed. For most papers written in college, students may assume that their audience knows who Shakespeare, Galileo, Marx, Einstein, Skinner, and Kennedy are and why they are famous. Readers probably need to have gone to college to know that Darwin's *Origin of Species* revolutionized Western thinking in 1859. But this audience would probably not know who Jamaica Kincaid, Margaret Mead, Stanley Milgram, Louise Nevelson, or Arno Penzias are, unless they are in the particular field in which the accomplishments of these people are well-known.
>
> **Level 3** readers are those who know about the same as our majors do about a specialized field. English majors would probably know that the Puritans closed the theaters in 1642.
>
> The **Level 4** audience is made up of individuals (faculty and other specialists) who know more than students do about a particular subspecialty. Students probably have to have specialized in Victorian history to know about the gingerbread vendor kicked to death by a Manchester mob in 1850.

The levels are useful because they dictate not only what facts need documentation or explanation but also what terms need additional information, i.e., in biology: Level 1 can be assumed to know what genes are; #2 knows what DNA is; #3 knows what mitochondria are; #4 is discussing non-histone proteins. In psychology, Level #1 needs to know who Freud is; #2 know who Freud is but not B.F. Skinner; #3 knows who B.F. Skinner is and what operant conditioning means and wants to see it discussed or applied further; #4 takes a stand on the Skinnerian controversy.[40]

Students should generally stick to Level #2 or #3: the generally well-informed reader or their professors who are especially knowledgeable in the discipline. Masters level students and beyond should move into the rarified atmosphere of Level #4.[41]

As usual, it's best to start any serious writing with a strong sense of audience and occasion. Are students taking an exam which demands that they show how well they've done their homework? Are they giving a report, the audience for which will determine what sources of information demand acknowledgment and which don't? Are they writing a term paper, which demands that they deal with other people's reports and cite them appropriately? Are they writing an essay, which is presumed to spring from their own depths?

✍ *Exercises: Point of View*[42]

Students work in groups of four. Each group is given 5 slips of paper. One tells of a crisis and the other four tell the roles students are to play in that crisis: Students are asked to write individual statements to the press, explaining their roles in the crisis, establishing their relationship to the crisis, and arguing in a way suited to their character's point of view.

Criminal Justice

1. A riot is brewing at Attica
   Roles:
   A. The leader of the rebel prisoners
   B. Warden of the cellblock
   C. Criminologist from Brockport
   D. Mayor of the nearest town
2. A chemical spill in Lennon threatens to contaminate the campus
   Roles:
   A. Student who performed the chemistry experiment
   B. Janitor who reported the accident
   C. Professor of Biology
   D. President Yu

Political Sciences

Countering ethnocentrism is a goal of political sciences in which students study multinational perspectives on an issue. For example, they learn about the Cuban missile crisis from the American, Soviet, and Cuban points of view. This gives students experience in legitimizing alternative interpretations without requiring them to give up their own positions.

What to Define

1. Familiar words used in special or unfamiliar way. When a common word, such as *apron*, also has a technical or special meaning of something other than clothing worn in the kitchen, the audience must know how the word is being used. Apart from its common household meaning, *apron* has several specialized definitions. It may be part of a lathe, a runway, stage, dock, or the area around a golf green.
2. Words whose meanings we want to limit. Stipulated or logical definitions are those that put special restrictions on a term. Students may need to state specifically how they intend to use a word because several interpretations are possible. For example, if they use the term *argument*, they would qualify the term by distinguishing its use as a highly civilized rhetorical debate from its use as a knock-down, drag-out fight.[43]
3. Technical terms for which there are no nontechnical equivalents. The word *modem* stands for modulator-demodulator and refers to a device for converting a computer output signal into a form suitable for transmission over telephone lines and then converting the telephone signal back into the proper form for a computer.
4. Acronyms/Abbreviations. Students should use abbreviations when they have a reasonable expectation that the terms will be understood (like *modem, SOS, RADAR,* [*R*adio *D*etecting *A*nd *R*anging]). Otherwise, they should state what the abbreviation means the first time the expression appears and show the abbreviated form in parentheses. Then students can safely use the abbreviation alone (*WYSIWYG*: *W*hat *Y*ou *S*ee *I*s *W*hat *Y*ou *G*et; *RACS*: *R*eturning *A*dult *C*ommuting *S*tudents; *SCUBA*: *S*elf-*C*ontained *U*nderwater *B*reathing *A*pparatus; *ARBYS*: *A*mericas *R*oast *B*eef, *Y*es *S*ir; *ROY G BIV*: *R*ed, *O*range, *Y*ellow, *G*reen, *B*lue, *I*ndigo, *V*iolet; *WIMP*: *W*eakly *I*nteracting *M*assive *P*articles; *SNAFU*: *S*ystems *N*ormal, *A*ll *F*ouled *U*p; *MACHO*: *M*assive *C*ompact *H*alo *O*bject; *MIDP*: *M*icrowave *I*nduced *D*elayed *P*hosphorescence.

Where to Place Definitions

When writers have only a few terms to define and they can be defined briefly and simply, the terms might be embedded in the text immediately following their first use. If the terms are long, complex, or numerous, defining them this way may interfere with readability. In this case, writers may place extensive definitions in a special section, in an introduction, in a glossary, or in a footnote or endnote.

Levels of Formality

Written along a continuum of precision and formality, definitions may consist of one or more synonyms or a short explanation. Some are long and complicated. Some have vague core meanings but shade into circumstances, perspectives, constructs, etc. When a simple word or phrase is insufficient to define a term, students can clarify its meaning in a sentence. For example, definitions of the term, *beret*, shown below by increasing levels of formality, depend on the conventions of the discipline, matters of punctuation, and space for the explanation, purpose, and the sophistication of the audience.

1. A beret--a round, flat, felt cap--has traditionally been worn by the French.
2. A beret, a round flat cap, is made of felt and worn by the French.
3. A beret is a cap which is round and flat and made of felt and worn by the French.
4. A beret, known to most people as a round, flat, felt cap, has traditionally been worn by the French.
5. A beret, that is, a round flat cap made of felt, has traditionally been worn by the French.
6. A beret is a round flat cap without a visor. It is made of felt and traditionally worn on its side by the French.

Informal definitions are usually incomplete, leaving a lot out or assuming readers can fill in the blanks. They provide only enough information about the term for readers to understand its use in context.

Examples

The *magnetic disk* is another high-speed medium that can serve as either input to or output from a computer system. Like tape, it has an iron oxide coating that is used to store millions of characters of data, typically 100 million or more. The magnetic disk drive is used to record information onto a disk and to read information from it.[44]

If layered rocks are compressed by forces active within the earth's crust, they may be deformed into wave-length structures. The ones resembling wave crests are called *anticlines*--from the Greek, to be inclined against oneself. The ones resembling wave troughs are *synclines*--from the Greek, to lean together.[45]

In sum, students should consider:

1. **Audience**. Ask who needs to know this information? Why? How much can we assume the audience already knows? What factors influence the presentation of the definition?
2. **Message**. What message do we want to convey? What should be its primary focus? How detailed should it be? What methods should we use to clarify the definition?
3. **Organization**. How should the information be presented (question/answer, etc.)? What principle or organization should be used (general to specific, climactic order, chronological order, etc.)?
4. **Format**. What is the most effective layout for the definition?

■ Forms of Definition

The logical aspects of thinking may be categorized in three ways: definition, explanation (see also Appendix Part 2), and justification.[46]

Reported Definition. A frequently used logical option for invoking an authority is to use a dictionary on the grounds that the dictionary is the best way to find out what the word really means. Students often adopt the *customary* usage specified by that reported definition.

Definition by Example. The example-nonexample form of definition provides illuminating instances and crucial cases that are not so. The example-nonexample form is especially useful for resolving vagueness in a concept and for introducing new ways of thinking.

Equivalence Forms of Definition. The synonym form of definition achieves the goal of establishing equivalents for the term being defined. The Classification and Range forms achieve equivalence. The Range and Operational forms below do not because they provide only concrete interpretations.[47]

Examples

> One of the basic ingredients is *phenol* (term). Perhaps you know this product better as carbolic acid, an old-time household disinfectant (definition).
>
> Checks should never be *postdated* (term), that is, written with dates that are days or weeks ahead (definition).

Range definitions. Range definitions give a list of characteristics most of which apply whenever the term applies. The range form provides a loosely bounded definition when the term is not a precise one. The boundaries of range concepts are indefinite, as are the boundaries of mountain ranges. Range definitions show this indefiniteness. The range form is especially useful for giving meaning of a concept that is fairly general in the field or that someone is deliberately introducing as vague in some context. Here is a range definition of romanticism, which shows the indefinite boundaries through the use of the expression *characterized by*:

> *Romanticism* is an artistic approach characterized by: 1) a sturdy and plainly expressed belief in the brotherhood of man; 2) a deep sympathy with humble lives, human and animal alike; 3) a sense of the independent spirit of man [sic] and his [sic] natural right to freedom; 4) its existence around the early part of the nineteenth century; 5) an expression of individual emotional experience; 6) de-emphasis of form; and 7) a concern with national consciousness.

In the range definition in the above example, the phrase *characterized by* is intended to indicate that no one of the seven features listed is meant as a necessary condition, but they all contribute to what is generally recognized as romanticism. The criteria for judging range definitions are that they should be as loose as the concept and cover similar indefinite territory.

Operational Definitions and the operational form indicate that a certain phenomenon exists by specifying precisely (and preferably in what units) *how* the phenomenon is measured.[48] For example, psychologists explain various means by which they measure or operate independent and dependent variables. Stipulating the meaning of independent variables and dependent variables is commonly known as *formulating an operational definition*, that is, defining a particular expression or concept in terms of how we measure or operate it.[49] Individuals specify the operations performed when deciding whether and how to apply the term.[50]

An operational definition ordinarily puts a "measurable" process performed by an investigator in an if-clause, and then gives, with as much rigor as possible, the relationship between the concept and the observation that would be made subsequent to the operation. An operational definition is useful when meaning depends on the particular operations involved. For a definition of *intelligence quotient*, the operation could be the administration and grading of a test; and the observations could report the answers, summarized by the IQ score.

Example of an Operational Definition

> If x is rubbed on y, then x is harder than y if and only if x scratches y. In the operational definition, the operation is the action of rubbing one thing on another.

Example: Academic Success

> **Nonoperational**: Academic success is based on doing well in all courses in the major and in most outside the major.
>
> **Operational**: Academic success is the ability to maintain a 2.0 GPA (Grade Point Average) by the end of the second semester of full-time study. Students are academically successful if, after completing college, they enter postgraduate training or a career in their major field.[51]

Logical Definitions: **Formal or Classification Definitions**. In some instances a formal definition is necessary. Most widely used is the classification definition because it provides brevity, rigor, and substitutability. Here are some guidelines for classification definitions: When constructing a definition individuals should first designate the class or genus to which the term belongs and then create a species by providing a feature or features that set this member off from the other members of the class. The order is

1. the term defined;
2. the larger class to which the term belongs; and
3. the distinctive characteristics that isolate it from all others of that class.

The defining part should be equivalent to the term being defined. The defining part should not use the term to be defined. The defining part should not give more than enough information to provide a complete classification.[52]

Example

> *Tissue* means the same as a group of similar cells performing the same function.
>
> The definition of tissue is a classification definition. Tissues are classified as groups of cells and are then distinguished from other groups of cells by the idea of equivalence of function.

■ Classifying[53]

Classifying is the basis of conceptual development, language, and higher-order thinking. It is logical and consistent in its structure and operation. That is why classifying is central to defining and why it deserves more attention than other patterns of paragraph development. At its most fundamental, without classifying we could not define because we would be unable to separate what is included in a group from what is not. To classify an entity is to identify one or more relevant classes to which it belongs and features, attributes, or qualities that it has. Interestingly, a correct classification may be an incorrect definition.

The two primary ways of classifying is either by *grouping* or *partitioning*: by grouping is meant gathering several items into a category; by partitioning is meant dividing items into several groups. Students may also organize their classification schemes *whole subject by whole subject* or *point by point*.

■ Spheres of Experience

After collecting data, the step before organizing the data into an integrated report is placing them into logical sets. These logical sets become categories of information or subtopics. They may be called *spheres of experience*. In effect, this step amounts to turning several similar bits and pieces of data into groups and subsequently determining a more general heading under which each collected piece of evidence fits.

Many undergraduates do not know how to name the various categories, groups, dimensions, features of phenomena that they form. Students can begin thinking about a starter list of adjectives so that they can form their sub or topic heads, e.g.: cognitive/intellectual, commercial, cultural, educational, emotional, fiscal/economic/financial, historical, mental/psychological, moral, national, personal, physical, political, recreational, religious, social, and so on. This process may be modeled for the class at the chalk board, asking students to place phenomena or entities under various labels reflecting the similarities or distinctions between them.

Choosing the Differentia

When students look for differentia, they should keep in mind distinctions between the term and other species of the same genus. Students may be able to find attributes shared by all the referents, but students do not need to include them all unless they are necessary for separating the concept from other species in the genus. They should name attributes marked by all the referents of the concept but not marked by members of the other species. Because a definition is selective, the attribute should be essential.[54]

Consider the classic definition of human beings: The human being is a rational animal. The term, animal, names the wider class to which human beings belong. It classifies humans as a species of the larger genus, animal. The term, rational, specifies an attribute that distinguishes human beings from all other species of the same genus. This part of the definition is called the differentia because it differentiates human beings from other animals. Differentia are rarely expressed in a single word like rational, but they serve the same function of separating a term from others of that species.

Example

Term	Genus/Class/Family	Species/Differentia
beret	hat	flat, round cap usually made of felt, without a visor, worn on the side by the French

Examples of Classification Systems

Student Classification of Courses

I. Easy
  A. Dance
  B. Tennis
  C. Basket weaving
II. So-So
  A. Psychology
  B. Communication
III. Hard
  A. Culture and disabilities
  B. Philosophy

Administrative Classification of Courses

I. General Education
  A. Breadth
    1. Social science
    2. Humanities
    3. Fine arts
      a. Performance
      b. Nonperformance
    4. Natural sciences
      a. Lab
      b. Nonlab, etc.
II....

Exercises

1. Arrange the concepts below in a classification diagram, showing the species-genus relationships. Then define each noun.

   New York, East Avenue, Rochester, city, the world, Western New York State, USA, western hemisphere, North America.[55]

2. Define one of the following concepts: property tax, semiconductors, or beta carotene. Locate the concept in a genus-species hierarchy, find a common/essential attribute that distinguishes the concept from other species in the genus, and look for counterexamples. When you are satisfied that you have found the right genus and differentia, formulate your definition as concisely as possible in one sentence or paragraph.

■ **Extended Definitions** (see Selye on Stress in Appendix Part 2)

While a dictionary gives us a fair idea of what a bunsen burner is, dictionary definitions are limited. They cannot adequately define the Federal Reserve System or nationalism. Insurance policies may need an extended definition of bodily injury. A report on *TQM* (*T*otal *Q*uality *M*anagement) might require an extended definition of efficacy testing. On occasion we may want our students to provide a full context for a term beyond synonyms or one-sentence definitions. When the meaning of a term or concept is a major element of a paper, students may need to provide an extended definition. They can amplify a definition by choosing from several related or supporting particulars.

When we ask students to explain or amplify a term in an essay, we should ask:

1. Does the essay use a textbook definition, a paraphrase, or their own?
2. Is most of the definition in the writer's own words?
3. How is the term explained: with examples, description, grouping, analyses, causes, or results?
4. Is there enough good and logical supporting data?

How to Extend Definitions

1. **State the Observable Common/Essential Attributes**. As in the guidelines for classifying, the term *essential* means fundamental: essential attributes cause or explain the existence of other attributes. The referents of a concept may have many attributes in common and that is the basis for the dictionary definition. Some are relatively superficial; some are essential.
2. **Provide Background**. The history or etymology of a term may result in a better understanding of its current meaning and a starting point for an analysis. Background information may include the discovery, development, and application of the term. The etymology of the word *computare*, for example, could discuss the invention and development of computers.
3. **Show Illustrations**. Examples and illustrations, verbal or graphic, are an effective method of extending the meaning of a term. Abstract terms, such as *liberal, conservative, morale,* and *efficiency*, can be better understood by providing examples. Certain technical terms can be better understood if readers see what the item looks like.
4. **Detail its Function or Purpose**. Describing the function of a term tells how it works or what it does. For example, a rolling pin is made for flattening dough. A Dutch door is a door divided in half horizontally, so that the two sections may be opened or closed separately.
5. **Analyze its Parts**. When the item or concept consists of several segments, each can be described and explained. What does the item do? How does it work? How does each part relate to the other parts and to the whole?
6. **Compare and Contrast the Term with Others**. Here students specify how an item or term is significantly similar to and/or significantly different from other items or terms with which the reader is familiar. For example, X is similar to Y in that.... However, X differs from Y in that....
7. **Define by Negation or Exclusion**. Negation states what something is not. In general, students are cautioned against using negatives when defining. However, some negative definitions are almost unavoidable. Some concepts are inherently negative and thus require negative terms in their definitions. Dark matter is mass that we do *not* see.[56] Failing a course means *not* succeeding in it. An empty house has *nothing* in it. A bachelor is a man who is *not* married [unmarried]. Balding is a condition of *no* hair on

the head. But we can also say, bachelors are single. We can also say: Balding is the absence of hair on the scalp. Or, it is a hairless condition. The automobile was once described as a horseless carriage. That would tell students what the term is not. That phrase certainly describes the automobile. The differentia, horseless, tells about one source of power that automobiles do *not* use. But there are many sources of power automobiles do not use. What is needed is the source that cars *do* use. For that reason, the definition fails to provide positive, essential, or common attributes. Incidentally, as with the term unmarried or hairless, we can also determine if a definition is negative by its prefix or suffix, e.g., child*less*, *im*mortal, *un*worthy, *as*symetric.

Students' Guide for Extending Definitions[57]

1. Identify your key term.
2. List all the occasions for using it.
3. Name the larger class/group of which it is a part.
4. List its component parts.
5. Identify its distinguishing features.
6. Generalize a meaning on the basis of its use. Are there any ambiguous uses?
7. See if the meaning of the term changes as the text proceeds.
8. Determine what this change or ambiguity tells you about the assumptions you are making.
9. Identify the words that oppose this term.
10. Ask yourself what the opposite terms have in common. How do they help define your key term?

■ Tips for Students: Definitions

1. Dictionary definitions usually state the most common attributes of the term. However, academic definitions often mix essential with common attributes.
2. Good definitions are not necessarily exhaustive, but they should be thoughtful and accurate.
3. Definitions should avoid vague, obscure, or metaphorical language.
4. Definitions should avoid negative terms, if possible.
5. Definitions should include exactly *all* and *only* what you intend. Definitions should not be too broad or too narrow. They should look for things that are not included in the concept, but would be included by the definition; in that case, the definition is too broad. For example, the definition, Man is a two-legged animal, is too broad because the defining phrase, two-legged animal, includes birds as well as humans.

6. You should also test the definition by finding counter-examples, that is, looking for things that are included in the concept but would be excluded in the definition. That would show that the definition is too narrow.
7. Definitions, like explanations, should not be circular or beg the question. That is, the term should not be defined in the same language of the term. This form of definition introduces into an argument a dubious conclusion true by definition. For example, psychologists proving that all responses are *shaped* by defining response as *shaped* behavior. Others argue that some behavior is not shaped, but rather reflects innate responses or reflexes. Stress is any *stressful* situation. Or, if *ownership* is defined as the legal relation between persons and something they *own*, the definition defines the concept of *ownership* in terms of itself. These definitions go nowhere; they just rotate in a circle. You need to know how the term relates to other concepts and/or to reality.
8. Formal definitions should avoid using where or when. For example, it is incorrect to say, stress is *when* you feel physical or emotional disquiet. It is correct to say, stress is a mentally or emotionally disquieting feeling.
9. There is a difference between the terms *explain* and *define* (see Appendix Part 2). Defining is saying what something is, while explaining belongs to the category of extended definitions.[58]
10. Where terms are defined in highly technical language, the surrounding language should be simple.
11. The more language that is given over to a definition in a paper, the more important that concept is considered to the purpose of the paper.
12. Definitions should be provided when terms are first introduced. Otherwise, readers think you don't know who they are. If you introduce material without defining it, it assumes a sophisticated readership. Then, two pages later, readers may get demoted to a lower level where they need things spelled out. If readers didn't know the term, defining it when it first appeared would have been more helpful.

■ Sample General Assignments

Generating Conceptual Definitions

1. Observe. Use the basic skills of correspondence and classification to identify the characteristics common to the examples you have grouped together.
    - A. Specifics and facts. Know the specific characteristics of the concept (specific statements that can be proven true).
    - B. Correspondence. Match the characteristics common to examples of the concept.
2. Classify. Group the examples of the concept to form a class on the basis of similar characteristics. List the common characteristics that identify the boundary of this concept or class.
3. State a label for the class or concept.
4. Test the boundary and label of the class.
5. Apply the concept in appropriate ways. In how many ways can this information be used?

6. Summarize. Define the concept using the characteristics, and label.
7. What do we call statements that have characteristics we have listed?
    A. Facts?
    B. Ideas?
    C. Viewpoints?
    D. Theories?

The Definition Essay

Write an essay of approximately *n* pages that extends the definition of.... Your piece should define your idea or event formally and then extend the definition in a way that explains or clarifies it to someone who does not understand it; so that **ordering** your information by what is most familiar or important would be appropriate. This is **not** a lesson in using a dictionary but a lesson in making meaning and communicating it.

Sample Disciplinary and Professional Assignments Using Extended Definitions

Arts and Performance

Art History[59] (The same exercise can be adapted to items from personality inventories, definitions of geniuses, bacterial infections, etc.)

Study 20 slides or plates of paintings of the human form (Chagall, Picasso, Eakins, Klimt, Cezanne, Bonnard, Gainsborough, Goya, Velasquez, etc.). Observe and make notes on the characteristics of each painting. Then decide whether or not any two or more paintings can be grouped under the same characteristic. Suggest possible classifications for these disparate representations. You must refine, collapse, and/or subdivide categories, arriving at your own taxonomy. Once satisfactory categories are generated, pick 3-4 paintings. Then write an essay proposing your system and illustrate it with key works.

Letters and Sciences

African American Studies[60]

What was the **Harlem Renaissance**? Describe the four major factors that gave rise to it. Contrast the **Harlem Renaissance** period to that of the **Protest** period of the 1960s. Substantiate that the **Harlem Renaissance** of the early 1900s had characteristics similar to the **Protest** movement of the 1960s.

Anthropology: Defining Disability[61]

The term *disability* is widely used today but has different meanings for insiders (those aware of their disabilities) and outsiders (people who are unaware of them), government agencies, health professionals, etc. This is further complicated by the fact that such terms as *disability, impairment,* and *handicap* are used interchangeably by some but treated distinctly by others.

In anthropology, we need definitions that are broadly applicable and allow us to determine the extent to which our goals are attained. Let's look at the term health. The World Health Organization (paraphrased from the WHO charter) defines health as a state of complete physical, mental, and social well-being, not merely the absence of physical impairment. As good as this is, it is not particularly useful because it refers to a state that is probably unattainable, and it is not operational (it provides nothing to measure health against).

Disability, like health, has a number of social, legal, and economic implications. Your task is to develop an operational definition of disability.

A globally useful operational definition should be

1. stated in objective terms;
2. presented in a way that determines whether or to what extent the state can be considered a disability (it identifies specific indicators of disability); and
3. applicable across socio-cultural and ethnic lines.

You will be divided into groups. Each group should prepare an operational definition of disability. If your group cannot come to consensus on the term, list the alternatives.

Anthropology: Classifying Disability and Perception[62]

A typology is a scheme for simplifying and putting order into an otherwise complicated world without making the definitions so broad that they cannot be applied to the real world. Use these four case studies to develop distinctive typologies:

1. You have been invited to serve on the political action group of the National Organization for Disability Rights. The organization's primary goal is to eliminate discrimination against people with disabilities. You discover fairly early that neither the public nor the politicians have a clear idea of what disability is, so you want to develop a typology of disability that will help you communicate more effectively with those who might help you in your efforts.
2. You have had a life-long, permanent, physical disability. You see yourself belonging to a minority that has faced an unfair burden of discrimination and have joined with others to form an activist disability rights organization. Your primary goal is to empower people with disabilities. To this end, you have decided to keep pressure on government and industry to assure that the provisions of the Americans with Disabilities Act are actually carried out. However, you are afraid that the current economic, social, and political climate jeopardize enforcement of the ADA. If that were not enough, your group is divided over how you should proceed, how exclusive you should be, and whether you should take more or less activist approaches.
3. To establish a basis for discussion, you decide to develop a typology of disability that is consistent with the current social, political, and economic climate.
4. Your group has been appointed to advise SUNY Brockport's Handicapped Services office on how best to meet the needs of students with disabilities. Your problem is that the law requires the college to make education accessible to all students with disabilities by providing reasonable special accommodations. However, the $1,000,000 shortfall projected in the college budget will make this impossible. You need, then, to identify those students and provide those services that will make the best investment with a limited budget. You decide to start off by developing a typology of disability that will help you focus your efforts.

History

Socialism. Analyze the relationship between **Socialism** and the **American way of life**. Because both terms are so broad, you must specify the aspect of socialism and aspect of life in America that you will address.

Mathematics [63]

Meaning of Function

Express in your own words the mathematical meaning of *function*: *A function must pass the vertical line test (a vertical line may intersect in one point, and a function shows the relation of x, D & y, R by use of one or more equations).*

Respond in writing to the above definition of a function. Treat the definition as a stimulus to express helpful comments on this subject that are of particular relevance to the student who wrote it.

Real Analysis[64]

Your assignment is to prove that when a sequence of real numbers is given, every subsequence of its subsequence is a subsequence of the given sequence. Most of you found this problem trivial. However, it must be proved. A proof presented in the text book is written using mathematical symbols. Your task is to explain the proof to people who don't understand mathematical symbols. You may use symbols to write the definition of a subsequence as well as the definition of a sequence. But you must integrate them in a well-formed sentence.

You may need several paragraphs to complete the task. In general a mathematical proof must be written in one paragraph. It may be a good idea to write each definition in one paragraph and explain it before you write a proof of the theorem. You may cite a concrete example after stating the definition to explain the concept involved in the definition. You may paraphrase the theorem itself. After proving the theorem, you are advised to add an example that illustrates the key point of the argument that you applied in the proof.

Political Science

Terrorism

Examine the following definitions of **Terrorism**. Identify the similarities and the differences among them, and decide which one you think is best.

1. **Terrorism** is the use of violence for political ends, including any use of violence for the purpose of putting the public or any section of the public in fear.[65]
2. **Terrorism** is the deliberate systemic murder, maiming, and menacing of the innocent to inspire fear for political ends.[66]
3. **Terrorism** is violence deliberately directed against civilians as the primary target for the purpose of demoralizing or extorting concessions from an enemy or attracting attention.[67]

Psychology[68]

The purpose of this assignment is to practice writing well-formed stipulated definitions of relevant terms or concepts. To specifically prepare for designing your experiment and establishing your experimental hypothesis, define the terms *independent variable* and *dependent variable*.

Approaches to the Stipulated Definition

1. List as many examples of independent and dependent variables as possible.
2. Explain the use of the terms, *independent variable* and *dependent variable*.
3. Explain various means by which you can measure or operate independent and dependent variables. This third way of stipulating the meaning of independent variables and dependent variables is commonly known as formulating an operational definition, that is, defining a particular expression or concept in terms of how we measure or operate it.[69]
4. Provide one operational definition each for all major independent and dependent variables identified in each of the research presented in the professional articles you have researched for this project. Quote accurately.
5. Construct operational definitions of independent and dependent variables that you are going to control for your proposed research.

Why are the following definitions not operational definitions?

1. A concept is a symbol that stands for a class of objects or events that have common properties.[70]
2. Maturation is a preprogrammed growth process based on changes in underlying neural structures that are relatively unaffected by environmental conditions.[71]
3. A mental set is a predisposition to perceive (or remember or think of) one thing rather than another.[72]

Psychology

The following definitions should be assessed as to how far, precisely where, and for what reasons their meaning is difficult to recover. Then, rewrite the weak pieces more clearly **while keeping to the exact meaning of the original**.[73]

The term *parasomnias* covers a cluster of disorders that interferes with sleep. The most important parasomnias are those that affect children--sleepwalking, night terrors, and bed-wetting. The three conditions share certain characteristics: They tend to occur during stages three and four of the sleep cycle, to run in families, and to appear together in the same child.

Social psychology is the branch of psychology that studies the psychological conditions underlying the development of social groups, the mental life, so far as it manifests itself in their social organization and their institution and culture, and the development of the behavior of the individual in relation to his or her social environment, or generally all problems having both an individual and a social aspect.

Psychology may be defined in various ways, according to the particular method of approach adopted or field of study proposed by the individual psychologist. A comprehensive definition, which would include all varieties of the term, so far as they can rightly be said to represent aspects of the original and historical meaning of the word, would run in some such way like this: a branch of biological science which studies the phenomena of conscious life and behavior in their origin, development, and manifestations, employing such methods as are available and applicable to the particular field of study or particular problem with which the individual scientist is engaged; the differences between psychologists are generally theoretical rather than scientific differences [sic], and in any case are far fewer, and scientifically far less important, than the points of agreement.[74]

Sociology[75]

Define structural theory, functional theory, conflict theory, and critical theory. Then explain how each theory provides a blueprint of society for sociologists. Last, to what conclusion about sport as a social institution does each theory eventually lead social scientists?

Professions

Business: Economics[76]

Use your own experience to work out definitions of the *household production function, asymmetric information,* and *the principal agent relation.*

Think back to a time when someone in your family had to go to the doctor. Describe the symptoms. Describe how the family first tried to cope with the problem. Explain what made the family decide to take the person to the doctor and what the doctor did.

Now go back and develop the notion of the household production function. You can compare the choices available to the household with those available to the manager of a kazoo firm. Or you can compare the household production of health with the household production of other primary products, like the production of education or nutrition.

You can develop the concept of *asymmetric information* by comparing the information the family had when it shopped for meat with the information it had when it shopped for medical care.

In developing the concept of *principal-agent,* specify the decisions the physician made for the family. Did the physician prescribe a drug that the family could not buy without an authorized signature? Did the physician give instructions that made the family more efficient? Can you see any risks in this relationship?

In every case you must put the term and the relationship it refers to into a general class and then differentiate it from other terms and relationships in this class.

Health Science: Child Development[77]

In her book, *Children Without Childhood,* Marie Winn makes the following comment: "Something has happened to the joys of childhood, the limits of childhood, the image of childhood.... [S]omething has happened to blur the formerly distinct boundaries between childhood and adulthood to weaken the protective membrane that once served to shelter children from precocious experience and sorrowful knowledge of the adult world....[W]hat's going on with children today?"

Identify and explain what you perceive to be the major factors contributing to Winn's remarks. Discuss your solutions to each of these factors, defining for readers the terms *childhood, adulthood, boundary,* and *protective membrane.*

Health Science: Nutrition[78]

Many terms related to human nutrition have either multiple meanings or are often not clearly defined. For example, the word, *organic*, technically refers to compounds containing the element carbon. Organic nutrients are proteins, lipids, carbohydrates, and vitamins. Organic is also used to mean or imply that a product is grown without commercial pesticides and does not contain any additives or preservatives. This definition has a more popular usage than legal status; only three states have a legal definition of an organic product.

In your own words, define the following terms as they relate to human nutrition and to their popular usage:

natural
oxidation
pernicious anemia
trace
hunger
buffer
whole food

Nursing[79]

Incorporate major concepts of nursing practice into your philosophy of nursing. As a prelude to writing a few pages about your personal philosophy of nursing practice, define the following concepts as they relate to nursing practice: *accountability*, *advocacy*, *autonomy*, and *responsibility*. For each definition give one example from your practice that illustrates the use of the concept. The example may be drawn from your use of the concept as a student nurse, extern, or LPN. Examples should accurately represent the concept and come from a realistic practice experience.

Nursing[80]

Define Cardiopulmonary Resuscitation (CPR)

1. What is it?
2. What does it do?
3. How does a person do it?
    A. Verbally: Explain in language suitable for a sixth grader to understand.
    B. Technically: Explain in systematic language each progressive stage of physical assistance.
    C. Visually: Demonstrate the proper techniques of physical assistance using the mannequin provided.

CHAPTER 6
USING SOURCES

Students suffer the burden of originality, when it is notable just to read and quote someone accurately.
John Maier

Virtually all the writing academics do is built on the writing of others. Every argument precedes from the texts of others. [Most students are] only partially initiated to how this works: [Most] are unsure as to how to weave quotations in with [their] own prose, how to mark the difference, how to cite whom [they use], how to strike the proper balance between [their] writing and someone else's--how, in short, to position [themselves] in an academic discussion.
English educator Mike Rose[1]

DOCUMENTATION

Students need to learn how to cite the work of others and how to paraphrase without plagiarizing without distorting the source.[2] Another way for students to think of documenting is as an aide for their readers. The reason they should document is not to make their material look more complicated[3] but to provide information for other people who might be using their piece as research material. The most common and universally accepted form of documentation is the citation. Citations are also the means of informing readers of where to get more of the information or opinions that were cited.[4] Obviously, if someone were reading their paper and wished to follow up on a particular aspect of it, citations would tell them where they could find information on the same subject. Following documentation conventions makes for consistency in format and greater clarity which, in turn, makes for easier reading.

Obviously, there are several ways in which students can document sources: e.g., the discipline of anthropology uses *The Chicago Manual of Style*. History uses *Chicago* as well as the *Modern Language Association* style, as does Foreign Languages. Dance uses *Turabian*. And the field recreation and leisure uses either *American Psychological Association* style or *Chicago*. The styles may differ, but the aim of all documentation is the same--to record in some brief and consistent form the author, title, facts of publication, and exact page from which each fact, opinion, and quotation is taken. Our majors should be required to have a copy of the style manual used in their respective fields.

What needs to be documented? Rutgers professor Barbara Goff answers: "Whatever doesn't belong to you or the world." In other words, we don't cite things for the same reason that a daredevil climbed up the outside of the World Trade Center: "Because it's there." Irrelevancies look suspiciously like fillers, and their presence suggests that students do not have their topic in hand.

When should students document? Ideally it is up to students to decide when to introduce material that does not originate with them. After all, a research paper is, by definition, a paper that, at least in part, uses facts and ideas that belong to someone else. But once students use outside material, they are then obligated to show their indebtedness to the original source in the form of documentation.

How much to document? When is enough enough? Tough questions, Sarah Liebschutz notes. Students rarely document too much, but they can easily document too little. Rather than those questions, students should answer truthfully: Will readers benefit from knowing where to find this information? Students often guess right about whether to document or not. But students also must consider who their audience is when trying to decide whether something needs documentation and/or further explanation.

One key to what needs documenting lies in the sources themselves. What sources do specialists themselves document? What do they take for granted? As students read through several sources on the same topic, they are apt to come upon references to the same information. Once they've read this information two or three times, they can be sure that it is considered general. But if it's still documented every time they come cross it, and the article or book is relatively recent, they can be sure that it is still considered owned by someone.

The difficulty lies in knowing the difference between general knowledge and a new or unique finding or opinion. As students read sources more and more, however, general knowledge becomes obvious, that is, what seems to be assumed on their topic as general knowledge versus what is specific to only one or two of the sources.

Documentation means giving credit, but if nobody owns the idea, no one deserves credit. And an audience has little use for a documented source explaining something they already know. We need to remember, however, that common knowledge is a relative term, for today's new information rapidly becomes tomorrow's common knowledge. Thus, while specific details about all-electric cars may require documentation for papers written in a basic physics course, the same information appearing in a graduate electrical engineering class would be considered common knowledge and probably not be documented. However, if students doubt whether something is common knowledge, they should document it. For a few years, for example, the structure of DNA belonged to Watson and Crick. Their discovery deserved to get credit, at least for a while, until the world owned it. By now, however, the double helix has entered the realm of common knowledge and doesn't need a citation. A motto to live by: When in doubt, cite.

Out and out facts belong to the world and therefore do not require documentation: for example, the fact that the Law of Gravity is Newton's formulation, the fact that Freud defined human personality in terms of the ego, id, and superego, the fact that we bombed Hiroshima in 1945. Students should note that only one of those items is an historical fact. What Newton and Freud defined belong to the history of ideas. But the fact of these ideas and what they mean and how they are applied are facts, nonetheless. Even relatively unknown facts such as the formation of the Pre-Raphaelites brotherhood of 1848 or the founding of Brockport as a teacher's college are facts that do not require documentation, though they may require explanation.

Received wisdom, facts, or ideas that are familiar to persons with an average education or information repeated in many sources also need not be documented. Lewis Thomas' concerns about how humans have lost touch with nature is a truism (or cliche) of our era and, therefore, far from original. It merits a yawn when it appears as a revelation in students' papers. If, however, they are particularly enamored with the way in which Thomas phrases his complaint, then students should, by all means, quote it.

New/Uncommon Knowledge. So much for people, their ideas, and events that are general knowledge. Documentation of facts is in order when data are new or when facts that were previously lost or suppressed are uncovered. The ideas, research findings, and conclusions of other individuals must be cited unless they are in the realm of commonly known facts or general knowledge. If students are talking generally about Freud's basic theories, they could probably mention a term like the Oedipal Complex and not have to cite it because most educated people are familiar with the concept. However, if students discover a little-known article by Freud on the virtually unknown Creon Complex, they would be obligated to lead readers to this article through a citation.

Other examples come from physics. Physics encompasses an enormous body of ideas that range from the purely speculative, familiar to only a few specialists, to the commonly accepted laws that have been part of our thinking for years. Many widely accepted principles, concepts, techniques, and fundamental equations of physics now bear the names of those who first proposed or discovered them: Einstein's Theory of Relativity, Boyle's Law, Ising Models, or Lorentz Transformations. Such named principles or techniques are either known to all physicists or are readily available in standard textbooks. They thus do not need to be cited. However, statements of facts or principles that might not be widely known outside a particular speciality may properly be cited for the nonspecialist reader.

Controversial Information. Documentation of facts is in order when data are controversial. An undisputed and commonly known fact might be: George Washington was born in Virginia on February 22, 1740. This would obviously not have to be cited. However, if students were to come across an article claiming that George Washington was, in reality, a Fascist spy, and they wished to present this information in their paper, then they would need to let their readers know via a citation where they found this curious fact.

Opinions. Just as opinions and ideas can become facts (as with Newton and Freud), so too facts can also be opinions. A recent example: Since 1945 the estimate of the number of Jews murdered by the Nazis has been 6 million. Surely, this figure can never be known exactly, even within hundreds of thousands, but the closest million can be approximated (to which must be added the Communists, Catholics, Spanish Republicans, gays, gypsies, and dissidents that the Nazis shipped off to the camps along with Jews). Some, however, have estimated that the figure is more like 9 million (which is probably just as easy to accept as 6 million since the magnitude is unimaginable to begin with) with evidence to support this 50% inflation. Recently, however, an historian published a book that concluded with evidence of its own, that relatively few (like hundreds of thousands) people were actually exterminated. Needless to say, he has come under all sorts of fire. Controversial evidence or not, this is only his opinion, at least until some unbiased and respectable scholars come forth to confirm it. If students stated his figure in a paper, or the 9 million one, it should be documented as an opinion belonging to someone. The 6 million need not be, since it's the one most people think of already.

✍ *Exercise: Documentation*[5]

Which of the following require documentation? How would you document each?

1. Many people, some of them even scientists, believe that the world is coming to an end rather faster than most of us had anticipated.
2. Though the "black hole" hypothesis was once generally dismissed, it has steadily gained favor among astronomers in recent years. One conclusion that might be drawn from it is that the universe is in a perpetual state of expansion and contraction.
3. After her husband's assassination, Ethel Kennedy remarked bitterly, "The nation that lives by the sword will die by the sword."
4. The first direct act of atomic warfare took place on August 6, 1945, at Hiroshima.
5. My mother always said that the road to hell was paved with good intentions.
6. "To be or not to be": that is, indeed, the central question for anyone who has experienced suicidal feelings.
7. There can be no denying the fact that industrialization and lung disease are inseparable twins; where you find the first, you are bound to find his grim brother.
8. Everyone is a repressed homosexual.
9. The Kinsey report stated that 53% of the adult population reported that they had had at least one homosexual experience in their lifetimes.
10. Seventy-eight percent of the people in the film industry have had Communist affiliations.
11. Three percent of the registered voters in America are members of the Socialist Workers Party.
12. In our time, political speech and writing are largely the defense of the indefensible.

Sample Disciplinary Documentation Assignment: Spanish Literature[6]

Purpose: To introduce students to common research sources and documentation forms in the field.

1. The main bibliographic sources are identified in the course syllabus:

   MLA International Bibliography
   MLA Dictionary of Periodicals
   Enciclopedia universal ilustrada
   Diccionario enciclopedico UTEHA
   Enciclopedia del arte en America.

2. During the first two classes the instructor discusses the bibliography and MLA form.
3. During the second week, the class is held in the library to familiarize students with research sources.
4. Students hand in between 5 and 10 bibliographic entries from a journal assigned to them.
5. A working bibliography for the course is assembled and distributed with the bibliographic information provided by students.

Examples of Documenting Secondary Sources

APA:

Examples of In-Text Citation (corresponding reference below)
Whenever we make choices about something new in our experience, we draw on parallels to something old (Sternberg as cited in Hunt, 1982, p. 52).

Sternberg (as cited in Hunt, 1982, p. 52) asserts that whenever we make choices about something new in our experience, we draw on parallels to something old.

Reference
Hunt, M. (1982, January 10). How the mind works. *The New York Times Magazine*, pp. 29-33, 47, 50, 52, 64, 68.

APA:

Example of In-Text Citation (corresponding reference below)
Sternberg (1986, p.47) asserts that whenever we make choices about something new in our experience, we draw on parallels to something old.

Reference

Sternberg, R. (1986). How the mind works. In M. Hunt (Ed.), *The philosophical eye*. (pp. 44-90). New York: Norton.

MLA:

Examples of In-Text Citation (corresponding work cited below)

Whenever we make choices about something new in our experience, we draw on parallels to something old (Sternberg qtd. in Hunt 52).

Sternberg (qtd.in Hunt 52) asserts that whenever we make choices about something new in our experience, we draw on parallels to something old.

Work Cited

Hunt, Morton. "How the Mind Works." *The New York Times Magazine* 10 Jan. 1982: 29-33, 47, 50, 52, 64, 68.

MLA:

Example of In-Text Citation (corresponding work cited below)

Sternberg asserts that whenever we make choices about something new in our experience, we draw on parallels to something old (47).

Work Cited

Sternberg, Robert. "How the Mind Works." *The Philosophical Eye*. Ed. Morton Hunt. New York: Norton, 1986. 44-90.

■ Documenting On-Line Sources

Electronic sources may be used when preparing reports, papers, etc. However, we need to recognize that these sources are not equivalent to print sources, such as journals and books, even microfiche. Using some electronic sources is fine, but students should use print sources if they expect to receive full credit on assignments that call for the use of outside sources. Although documenting electronic sources vary, below are examples of how they may look[7]:

APA:Basic Citation Components and Punctuation

Author, I. (Date of Publication). *Title of document*. [On-line]. Available (through which venue): Specify path.

Examples

Fanderclai, T. L. (1995, January 1). MUDS in education: New environments, New pedagogies. *Computer-Mediated Communication Magazine* 2.1. [On-line]. Available World Wide Web: http://sunsite.unc.edu/cmc/mag/1995.

FTP Site

Smith, J. (1994, October 2). Frequently asked questions: Basic information about Muds and Mudding. #1. [On-line]. Available FTP:ftp.univie.ac.at Directory: archive/faq/games/mud-foq/part 1.

E-mail Message

Page, M. [page@etsuarts.east-tenn-st.edu]. 1994. "African dance . . .and Malawi." Private e-mail message to Masankho Banda, [mbanda@igc.apc.org]. 28 November 1994.

MLA: Basic Citation Components and Punctuation

Author's name, full first name (last name first). *Document title*. Date of internet publication or posting. Number of pages. Sponsoring organization. Date of access. Available (through which venue): <<Specify path>>.

Examples

World Wide Web Sources

Fandiclai, Tari Lin. "MUDS in Education: New Environments, New Pedagogies." *Computer-Mediated Communication Magazine* 2.1 (1 Jan. 1995). On-line. Internet. 10 Feb. 1996. Available World Wide Web: <<http://sunsite.unc.edu/cmc/mag/1995/>>.

Smith, Jennifer. "Frequently Asked Questions: Basic Information About Muds and Mudding #1." 1994. On-line. Internet. 20 July 1996. Available FTP: <<ftp.univie.ac.at (/archive/faq/games/mud-faq/part 1)>>.

E-mail Message

Smith, Margaret. E-mail to Ann Jones. 20 March 1997.

QUOTING, PARAPHRASING, AND SUMMARIZING

The ability to quote, summarize, and paraphrase lies at the heart of education. All three forms serve the purpose of getting an author's point across. If well documented, these forms save readers the trouble of hunting up an article or book in the library to see what the idea is all about. This ability requires being able to read with understanding, to think about what the author's point is, to add that author's point to readers' own ideas, to speculate about the meaning of that point and its place in their own thinking, and finally, to make it meaningful to themselves and to others by communicating it in their own work.

Students may summarize, paraphrase, or quote directly from outside sources, but they must be sure to do two things:

1. give the reader full information about each source; and
2. make the extent of their indebtedness clear.[8]

■ Quoting

Several words in succession taken exactly from another source constitute a direct quotation. Because it reproduces an author's words exactly as they were spoken or written, preserving even the peculiarities of spelling, grammar, or punctuation, a direct quote can be one of the most effective and convincing forms of evidence.

Furthermore, if done correctly, quoting is the easiest and safest form of documenting because no one can accuse students of misrepresenting an author's ideas if they present those ideas fully and fairly in the author's own words. After all, quoting is taking a writer's actual words and repeating them for a specific purpose. It appears that over half the job is done for students. Students thus provide themselves with "plagiarism insurance" if they specifically identify the writer they are quoting even without a formal footnote.

When students quote they don't risk misunderstanding the author. Nor do they risk inadvertently using his or her ideas as their own (thus leaving themselves open to accusations of plagiarism). When students quote they are also varying their writing in such a way that it holds readers' interests. Visually as well as literally, they change the stylistic scenery.

Under certain circumstances it is better to quote than paraphrase or summarize. Quoting evokes the authority of the author. Sometimes the original material is so strikingly or felicitously expressed that any attempt at summary or paraphrase would ruin it. Students' essays may demand the specific wording of their source to make their point. This is especially important when students wish to argue against a source. Fair play demands that they not misrepresent their antagonists to support their own argument. Antagonists should speak for themselves, for it may even make students' own arguments stronger.

However, it's important that students don't let quotations overpower their own writing. We regard excessive inclusion of quotations as a sign of padding, and we are correct to respond with suspicion. Or the overuse of quotations indicates either that students do not have a clear focus on their topic and are jotting down verbatim just about everything related to it, or that they have used inadequate sources. Furthermore, if used excessively and indiscriminately, direct quotes can be evidence of students' lack of critical ability and judgment. We suspect that if students cannot restate the author's points in their own words, they do not understand them. There is nothing quite as ineffective as a paper that simply strings long blocks of quotations together (a version of chaining; see p. 226); it is an admission that students can't think of anything to say.

Unless we note otherwise, students' papers should contain more of them than of other authors. We can specify that students limit quoted material to no more than 10 percent of the total paper or no more than 20 to 25 percent of the writing in the form of quotation, summary, or paraphrase. A general rule of thumb is for students to quote only as much as is needed to make a point. As in many areas of writing, common sense is the final authority. And that takes practice.

■ Tips for Students: Using Quotations Effectively

1. Having all your citations come from one sustained argument suggests that you possibly could have done better summarizing it.
2. A paper consisting largely of quoted passages is relatively worthless. Too many quotes are boring to read and arouse our suspicion that you needed upholstery, or you don't trust your own understanding of the material since you can't seem to provide your own words for it.
3. Some quotes suggest that you read only the introduction and conclusion of the material. On the other hand, maybe that's all you needed.
4. Other quotes suggest that you looked up the topic in the index and got the two references to it in the book. Again, maybe that's all you needed from that source.
5. Still other quotes suggest that you didn't have time to read the whole book. Or, happily, you saw how clearly it disagreed with what you said and used the quote as a way to frame your opening argument.

■ The Mechanics of Quoting

The examples of quotes below are followed by a note for students about the mechanics involved (shown only in MLA). The examples move from simple to complex, both in grammar and in thought. Examples one to four quote only as much as is needed to make a point or answer a specific question. Examples five and six may provide a jumping-off place for discussion.

1. **Simple Quote** as a grammatical part of a sentence: no comma.

> Orwell describes the language of politicians as "the defence [sic] of the indefensible"(45).

Notice that the quotation forms an integral part of the sentence and should not be separated from the rest of the sentence with a comma. The [sic], the Latin word for "thus" placed in brackets, shows that though a word or words in the quotation might appear to be a mistake in transcription, the supposed error is, in fact, the way the writer wrote it. The apparent mistake is the spelling of "defence," which is actually correct in British spelling.

2. **Simple Quote,** not as a grammatical part of a sentence: use a comma.

> As far as stemming the decay of the language goes, Orwell's prescriptions at the essay's end suggest that he is hopeful. He also states quite directly, "I said earlier that the decadence of our language is probably curable" (3).

The quotation here is separated from the rest of the sentence by a comma. The introduction to the quote looks like the narration of dialogue in a novel or a short story. Also, note that the quotation is a complete sentence and that its period is also the period of the whole sentence.

3. **Simple Quote with Ellipsis**. When quotes in full are unnecessary, but salient points should be articulated, ellipses may be used (three dots for a word or group of words; four dots if what is omitted falls at the end of a sentence).

> Orwell crisply asserts that "[m]odern English . . . is full of bad habits which spread by imitation and which can be avoided if one is willing to take the necessary trouble" (33).

Using ellipses is all right only when omissions do not alter the writer's meaning. Do not omit a *not*, *never*, or other important qualifier because they risk misrepresenting the author's ideas. Quotes of, say, three sentences should not just be inserted to provide readers with the particular words in them that writers believe are most important: instead, quotes should be shortened and summarized by way of ellipses:

4. **Simple Quote with Brackets**

> Orwell disclaims having referred to "the literary use of language, but [rather]" claims that "language [is] an instrument for expressing and not for concealing or preventing thought" (42).

Brackets indicate that words have been added or a quotation has been altered to clarify or conform to the grammar or syntax of the sentence. Brackets may indicate a change in pronoun case, e.g., from first to third person when quoting something written in first, which would sound odd if left in the first person in an essay written in the third.

> Frank Sinatra is often thought to have meant something threatening and menacing when he said he "did it [his] way."

To have quoted the line absolutely accurately would have confused the pronouns in the sentence, "he did it my way!" which means something very different. The first pronoun in the expression is not quoted--"he"--since it is technically not part of the quote, "I did it my way."

5. **Quote Within a Short Quote** (fewer than four lines). When sources quote someone else, use regular quotation marks for the source and single quotes for the quote-within-the-quote. The citations also reflect a secondary source.

> "Orwell notes in passing a bad use of a word that has not faded away since 1945; if anything, this poor usage has spread: The word Fascism has now no meaning except in so far [sic] as it signifies 'something not desirable.'"

The final punctuation has been Americanized. Note that *insofar* is not written as one word as it should be. The [sic] is placed around it, so it does not look like an error.

6. **Quote within a Quote** (when a quote is indented). A quote of more than four lines or 40 words should be single-spaced and block indented from both the left and right margins (check your disciplinary style manual), which also serves as a visual cue to readers that what they are reading is a quotation.

> Orwell provides a striking example of how word meanings may be diluted in certain circumstances.
>
>> When one critic writes, "The outstanding features of Mr. X's work is its living quality", [sic] while another writes, "The immediately striking thing about Mr. X's work is its peculiar deadness",[sic] the reader accepts this as a simple difference of opinion.

Here the indentation and single spacing indicate that writers are quoting, so the quoted material within the quotation can be transcribed exactly as Orwell wrote it. Quotation marks are unnecessary here. However, if the sentence were fewer than four lines or 40 words, the whole thing would remain part of the prose, be enclosed in double quotes. Further, his sample sentences would be enclosed in single quotation marks (as in #5) to distinguish them from the writer's quotation. Note that Orwell places his commas outside the quotation marks, which is the correct British practice. In America, though, doing so is incorrect. The convention here places commas and periods inside quotation marks under any circumstances.

One of the hardest decisions for students to make while writing a paper--besides what to quote--is how to ease into quotations gracefully. Quotations should be smoothly and responsibly integrated into the surrounding prose so that they connect grammatically and thematically with the sentences that precede and succeed them. Students should not merely insert quotations just to impress; they should introduce them beforehand, interpret them, and spell out their implications afterwards--all to make sure students maintain authority over their paper.

■ Tips for Students: Introducing Quotations Effectively[9]

1. Introduce a quote by identifying the writer whose work the quote comes from, unless you mean to surprise readers or the person is so unknown as to make no dent in believability.
2. Name the source (title of book or article) and date if it is persuasive.
3. Give the person's credentials in the field in order to lend authority to his or her words (e.g., instead of saying: John Smith states: "U.S. defense missiles outnumber Russian missiles two to one," you can write: John Smith, former United States Secretary of Defense, states in his book *Guns or Butter*, "U.S. . . .").
4. You should not just introduce a quote with "So-and-so states: ' . . . .'" If you want to make sure that your readers extract a particular message from the quote, you can set readers up. You can provide an interpretation in your introduction to the quote (e.g., President Nixon was obviously aware of the logical implication surrounding his role in Watergate when he insisted: "I am not a crook.").

✍ *Exercise: Integrating Quotations*[10]

In the space following each example, write your own sentence(s) in which you integrate quotations with your own writing. Use the italicized material as a model. (Quote from one of the sources you are using for a critical paper this semester.)

1. Introduce the quotation by paraphrasing the subject, identifying the speaker, then quoting extensively.

Paleontologist James Marlow of Harvard observes that Theropods, in particular, "put their feet almost one in front of another. They had a gait very similar to a human being's."

2. Introduce the quotation by putting the main idea in your own words first.

   Theropod tracks he has studied in Texas convince Marlow that the predators moved along briskly. "Their walking pace was somewhere between three and six miles an hour," says Marlow.

3. Introduce the quotation by inverting the subject and verb and using a colon.

   Boasts Lockley: "The conventional wisdom was that baby brontosauruses were hard to find."

4. Interrupt a quotation to identify the speaker.

   "We went in for three years to look for tracks," recalls Lockley, "and found footprints from 240 individual dinosaurs."

5. Paraphrase the general and quote the specific.

   The most significant thing about dinosaur tracks, says Martin Lockley, a geologist at the University of Colorado, is that "they're so abundant relative to bones. Every animal has only one skeleton, but it can leave thousands of prints."

6. Paraphrase the facts and quote the opinion/commentary.

   He has also studied trackways that were probably made by running theropods. Top speed: between 15 and 20 m.p.h. "That's not as fast as an ostrich or a good racehorse," Lockley states, "but it's faster than anything a human can do."

7. Alternate between paraphrased and quoted sentences.

   Now he is tackling the question of why some dinosaurs limped, alternating short steps with long ones. "We're finding that those are quite common among both quadrupedal and bipedal dinosaurs," Lockley reports. It could be because of injury. Yet why do so many different species show the same limp?

The Paraphrase

When writers want to use someone else's ideas but have no reason to quote exactly, they can paraphrase. Paraphrase means to rewrite or represent what someone else has written by selecting, reducing, and/or amplifying certain parts of its material to suit the writers' purpose by creating the new context for the original material.

A paraphrase, strictly speaking, is nothing more than the translation of someone else's point into our words. Ordinarily, the paraphrase is the most frequently used device for using the work of others in a paper. The paraphrase uses the information of others but not their style.

Paraphrasing may be used for individual sentences, short passages, whole paragraphs, or even whole sections. Paraphrases are frequently written in about the same number of words as the original. If the ideas in the original are particularly difficult or complicated, however, students may need to write even more than the original. Students need only be sure that their paraphrase is as long or as short as it needs to be to explain clearly, not confuse; that's the reason the paraphrase is there in the first place.

Paraphrase is another step in students thinking-for-themselves, for its emphasis is less on the *what*-ness of the things (a quote does that by itself) than on students' use of the data or ideas, the *so-what*-ness of something. In this respect, putting something "into one's own words" introduces the element of interpretation. This in turn allows for more subjectivity. Students can state what is irrelevant, important, or flawed. They can expand it, invert it, transform it, and so on. They can argue or challenge its merits.

When paraphrasing, students must still remain accurate not only in content but in connotation. The material should not be distorted or quoted out of context. Students should preserve the essential truth of the material. Merely rearranging the order of the words in the sentence or changing the pronouns or other parts of speech does not absolve students' responsibility for crediting the source of their ideas. It just misrepresents, failing to acknowledge the fact that the ideas are original with someone else. The point of view and the presentation may belong to students, but the ideas belong to the original author. In other words, students may still borrow an idea, opinion, interpretation, or statement of an authority but rewrite it in their own language. Paraphrasing allows students to rephrase and use the material selectively.

The first requirement of paraphrasing is that students understand the author's point without editorializing. The next requirement is that they see potential connections--even if by contrast. The paraphrase itself, then, restates the author's point in terms that makes it comparable to students'.

Properly used, the paraphrase is a valuable technique. Sometimes students' tasks are not merely to report what has gone before but to offer something new. On another level, students can summarize or paraphrase to simplify ideas or information so that they, properly acknowledged, may be woven into the pattern of their own ideas. Scientific reports, as well as critical papers proceed the same way, freshly combining old data to come to new conclusions.

Students thus need to document a paraphrase just as they would a quotation, especially if the point is clearly and unequivocally something they could not be responsible for, such as the results of a scientific experiment that they have paraphrased to avoid lengthy quoting. They should not paraphrase simply to avoid quotations or avoid appearing overly dependent on sources.[11]

Paraphrases

1. demonstrate that students have mastered and assimilated the material to the extent of being able to state it in their own words;
2. give the paper an even, consistent style, since both original and source material are cast in the words of student writers; and
3. provide a short-cut for dealing with someone else's points, so that students can get on to the far more interesting enterprise of making their own.[12]

■ Tips for Students: Paraphrasing[13]

1. Paraphrasing material is generally more effective than quoting indiscriminately.
2. To paraphrase without plagiarizing, take notes in your own words. If that is initially difficult, you may also write questions. Then, without the questions, pencil, or paper, read for twenty minutes. Last, make notes without the original. Or read the relevant passages, then close the book and write. Either way, chances that you will plagiarize are reduced.
3. Write paraphrases in your own style (sentence structure, diction level) in about the same number of words as the original.
4. Preserve the tone of the original (e.g., satiric, angry, humorous, condescending, etc.).
5. Retain exceptional words and phrasing from the original. Such duplication is acceptable since it might be impossible to find synonyms for some terms.
6. In order to avoid any hint of plagiarism, provide full citations.
7. Summarize bulky references or material of doubtful importance.

■ The Summary and the Abstract[14]

In contrast to the paraphrase in the course of writing research papers, students may be called on to summarize the literature (i.e., the body of experiment, research, commentary) on a given subject (see also Chapter 7). A summary is a paraphrase that deals with the whole of something. Summaries are considered embedded in larger text, unlike the stand-alone abstract (see below).

Summarizing is the telescoping of writers' main points into a succinct, clear, yet comprehensive form that readers can trust represents writers' ideas. A good summary is brief, accurate, complete, and objective. In addition, it exhibits the qualities of all good writing: clarity, coherence, and unity. It depends on students' ability to understand the material, isolate the important points, derive a movement from these assertions to their generalized conclusions, and restate that material in their own words *without their own opinions*. Student papers frequently tell readers what they *think* about something else. In the summary readers are simply told *about* something else. There is a shift in allegiance and emphasis. Summaries may be formal or informal, personal or impersonal. Summaries are not usually documented, but, under certain circumstances, a summary may require a note.

Although a summary is a brief restatement *in students' own words* of the content of their work or a passage, chapter, book, or article, an effective summary may indeed quote or use the author's key terms. When we paraphrase we are probably summarizing as well. While a summary is a kind of paraphrase of the whole of something, it is unlike a paraphrase in that a paraphrase does not necessarily quote or use key terms.

Students should practice summarizing for several reasons: It insures that they fully understand the meaning of the original; that they have their topic under control; that they can distinguish between essential and nonessential information; and that they help readers get the gist of information or the shape of an argument. The ability to summarize, to know what something says, is another step in helping students think for themselves.

Some scholars say that a summary should be no more than one-third of a complete piece. However, students may also summarize in a couple of sentences (sometimes called a *precis*) a point that a source may have taken pages to develop. A one-sentence summary of an essay would amount to its controlling principle or thesis.

Summaries are used in some specific circumstances:

1. Most scientific papers include summaries of themselves before the paper begins (see Abstracts section following).
2. Reports for courses in college or on the job often summarize background data or a survey of the literature.
3. An annotated bibliography includes short abstract-like summaries of the material included with each entry.
4. An annotated bibliography becomes a "critical" bibliography when the summaries include students' evaluations of the utility or quality of the work cited.

■ Tips for Students: How to Summarize[15]

1. Read the material carefully to determine the author's purpose.
2. Select the most representative sentences from each section of the material.
3. Label each section of thought (sometimes one paragraph, other times more than one), underlining key ideas and terms.
4. Write one-sentence summaries of each section of thought on separate paper.
5. Write a one-sentence summary of the one-sentence summaries.
6. Write a draft by combining these topic statements with other sentences. Add significant details; eliminate repetition and less important information or generalize from them.

7. Insert connectives where necessary or appropriate.
8. Check the summary against the original passage. Make whatever adjustments are necessary for accuracy, proportion, and completeness.
9. Check for surface feature correctness.
10. Preserve the tone of the original. If the original is formal, for example, maintain that tone in the summary.
11. Decide on the relative importance of different information. Ask yourself: If the information were not given, would the intent of the original work still be clear?
12. When opposing views are presented, your summary or abstract should reflect that proportional weight.

■ Informative and Descriptive Summaries[16]

Ask students which statement provides more information: They grow tea because of climatic conditions. Or, They grow tea because it is cold. The second sentence that provides the "climatic condition" by stating its coldness is an **informative summary**.

There are two general types of summaries. **Descriptive** summaries adopt a distant perspective, describing the original text rather than directly presenting the information it contains. For critical or evaluative purposes, descriptive summaries are preferable. A descriptive summary of the Declaration of Independence might begin as follows:

> Jefferson opens the Declaration of Independence by stating that a country declaring independence needs to give reasons. He goes on to discuss the purposes of government in protecting individual rights and the legitimacy of change if government does not live up to its obligations.

Informative summaries adopt the tone of the original full text, presenting information in shorter form. To convey the content of a source, informative summaries are preferred over descriptive summaries. An informative summary of the same passage might begin as follows:

> When people declare themselves independent of their political ties, they should give reasons. Governments are formed to protect equality and rights, including life, liberty, and the pursuit of happiness. If the government does not do these, the people can change it.

Examples: Paraphrases and Summaries

Original Passage

In one sense, therefore, the conflict between science and religion is a slight matter which has been unduly emphasized. A mere logical contradiction cannot in itself point to more than the necessity of some readjustments, possibly very minor on both sides. Remember the widely different aspects of events which are dealt with in science and religion respectively. Science is concerned with the general conditions which are observed to regulate physical phenomena; whereas religion is wholly wrapped up in the contemplation of the beauty of holiness. What one side sees, the other misses; and vice versa.

Paraphrase

In "Religion and Science," a chapter from his book, *Science and the Modern World* (1925), Alfred North Whitehead dismisses as small and over-emphasized the many possible disputes between, say, a Jerry Falwell and a Carl Sagan. Whitehead reminds us that science and religion deal with different subjects and have different purposes. Scientists want to explain why heavy objects fall back to earth. Priests and theologians want to explain what God is like. In the end, Whitehead thinks neither science nor religion sees the whole picture. Each explains what the other omits (p.47).

Summary I

Whitehead observes that too much fuss has been made over religious and scientific disputes, since both deal with different parts of the human experience, and since neither can explain the whole of our experience.

Summary II

Too much has been made over religious and scientific disputes, since each deals with only part of the human experience and neither can explain the whole.

■ Tips for Students: Introducing Paraphrases and Summary Statements[17]

1. For an opinion, you should give the person's name and, ideally, the source of the statement.
2. For factual information which is obscure or debatable, once again, cite the author and source.

3. For a statement when you wish to lend weight to your arguments, introduce it as you would a quote, even including the credentials of authorities: names, titles, affiliations, roles.
4. When you feel no need to call attention to your source or authority, you need not introduce her or his name at all--except as necessary in an in-text citation and reference.

The Abstract

An abstract makes important information in a long piece of writing available in a condensed and convenient form. Abstracts help writers identify the essence of the material, preserve, and communicate it. While both the summary and the abstract represent the larger work, the chief difference between the summary and the abstract is that the abstract is a stand-alone piece. Commonly abstracted are review articles, theoretical articles, dissertations, empirical research, case law, and government documents. Abstracts are also used when indexing articles: *Psychological Abstracts*, *Dissertations Abstracts International*, etc. In the natural and social sciences abstracts regularly appear before the beginning of journal articles. Abstracts traditionally retain much of the original language, avoiding the paraphrase.

The abstract is usually paragraph length. Scholarly sources often stipulate no more than five or six sentences or even a radical condensation to two lines (precis).

Qualities of good abstracts are similar to those of summaries. They must use the correct person (first, third, passive voice) and reflect in number of words the correct proportion for information given. They must be

1. accurate (not under or overstated);
2. concise and specific;
3. self-contained;
4. coherent and readable;
5. non-evaluative; and
6. reflective of the tone of the original.

Outline for Abstracts of Empirical Research[18]

1. Problem under investigation
2. Subjects and their pertinent characteristics
3. Hypothesis
4. Procedures: experimental method, intervention, apparatus, data collection
5. Statistical treatment

6. Results including statistical significance
7. Conclusion and implications

Outline for Abstracts of Theoretical or Review Articles

1. Topic
2. Thesis
3. Scope
4. Evidence
5. Conclusions/Implications

Examples of Informative Abstracts: SUNY Brockport Scholar's Day

Specifications: Third person, Present tense, 150 words.

Text and Image in the Renaissance: From Book Illustrations to Visual Meaning.[19]

This presentation and slide show examines the interrelationship of words and pictures in the Renaissance. Developing out of the tradition of illuminated manuscripts, the first printed books soon began to use illustrations in ways that reflected the Renaissance fascination with bizarre symbols, speaking pictures, and hidden meanings. The development of the visual/verbal "emblem" form is the culmination of this tendency, and it clarifies the ways Renaissance playwrights envisioned their theatrical works and the ways these works conveyed meaning.

"You and I": Negotiating Models of Disabilities in Life Histories.[20]

Life history texts provide windows on the culturally-defined models of reality that help frame individual behavior within cultural contexts. One problem in interpreting life history texts is that the individual's behavior may be informed by competing--and sometimes contradictory--models. For example, a person may have idiosyncratic models of disability. That same individual may have "public models" of disability that reflect larger societal models. Dr. Edwards describes a computer-based approach to text analysis that can help sort out these models.

Sample Evaluation Sheet for Freestanding Summary or Abstract[21]

Content		
Accuracy	10----------------------------------0	____________
Completeness	10----------------------------------0	____________
Organization		
Original order	4 3 2 1 0	____________
Original emphasis	5 4 3 2 1 0	____________
Development		
Background (Intro. author, title)	3 2 1 0	____________

Free of pitfalls					
Too wordy	3	2	1	0	________
Too telegraphic		2	1	0	________
Too many quotations		2	1	0	________
Too detailed	3	2	1	0	________
Writer's opinions	3	2	1	0	________
Undocumented		2	1	0	________
Diction and usage	3	2	1	0	________
Grammar and sentence structure	3	2	1	0	________
Style and tone	3	2	1	0	________
Mechanics					
Form		2	1	0	________
Punctuation		2	1	0	________
Spelling		2	1	0	________

✍ *Exercises*

1. Have students take manuscript submission guidelines for a journal and write an abstract according to its instructions.
2. To practice determining what to select, ignore, or combine when compressing ideas, have students condense significant facts from a piece of writing to a page, a page into a paragraph (summary or abstract), a paragraph into a sentence (thesis), and last a title, generalizing with each reduction but retaining essential information (see Hayakawa's Abstraction Ladder in Chapter 3).
3. Speed writing.[22] Students are given a familiar topic from a previous lecture or discussion. There is a brief discussion during which time key words or phrases are written on the chalkboard. Depending on the topic, students are allowed a minute to reflect on them before speed writing for about five minutes. If there is time for papers to be read aloud, say, in groups. During the first reading, students attend to the general sense of the passage; during the second reading, students attend to organization; during the third, to key words and subtleties. Students take no notes. Students exchange speed writes and discuss. Originals are given out and compared.
4. Have students write paraphrases and summaries.

Examples

Library Source[23]

More than any other scientist, the American inventor Lee DeForest was responsible for the basic developments that underlie the science and technology of the modern vacuum tubes. When DeForest finished his doctoral degree at Yale, specializing in radio waves, he resolved to excel in the new field of wireless communications.

Student Paraphrase

Lee DeForest was an American inventor who did much of the basic research on vacuum tubes. When he received his doctoral degree at Yale, he decided to make radio waves and communications his major interest.

Student Paraphrase

DeForest sought to develop a business enterprise of his vacuum tube developments, but he was less successful as a business organizer than as a pioneer in electronics.

Questions to Guide the Paraphrase:

1. What are the major differences between the two paraphrases and the original language? How do the paraphrases use simpler language than the library source?
2. What words would sound less formal than business enterprise, business organizer, and pioneer in electronics?
3. How might you write the one long sentence as two shorter sentences?
4. What are vacuum tube developments?

Alter the audience and ask students to paraphrase again.

CONTROLLED RESEARCH: TESTING THE LITERATURE

Before students undertake a major research project, we can assess mastery of documenting protocols through controlled research. In research that is controlled, students work with a maximum of only three articles--which means, as instructors, so do we. The obvious benefit to us of a nested project is that, by restricting sources, we simplify for students the critical evaluation of a work and the accuracy of quotations, paraphrases, summaries, intratextual citations, end or footnotes, references, and so on. We also test students' ability to report, analyze, and evaluate facts. Rather than spending time verifying library or electronic material for sources, we can concentrate on student thinking, documentation, and potential plagiarism. It is research in microcosm. And we have the source material at our fingertips.

In one such critical project a number of important cognitive skills are mobilized:

1. reading, interpreting, and writing carefully;
2. abstracting complex points of view;
3. analyzing the merits of an argument on the basis of evidence (empirical, definitional, rational, theoretical, and/or anecdotal);
4. practicing various forms of documentation;
5. moving back and forth between full paper, abstract, trial thesis, and title;
6. writing informative and descriptive abstracts[24]; and
7. learning methods for avoiding plagiarism.

Rhetorical Analysis: How to Trust a Study[25]

The most serious and baffling work for students is to determine if a source is accurate or not. While we know that merely reading something does not make it true, many students do not know that. Students need to ask what evidence is really worthy. How do they know when they know?[26] And here is where cognitive weaknesses may be most pronounced. Because writing a research paper is in part an exercise in critical judgment, students should learn to protect themselves against false or biased information by scrutinizing and evaluating the utility of an article, chapter, or book. They should look at its publication date, abstract, table of contents, index, preface, afterword, foreword, glossary, and introduction. They also should evaluate first and last sentences of passages, chapters, articles, the argument's assumptions, evidence, and structure.

In a rhetorical analysis upper-division majors in virtually any academic field learn

1. how to defend, challenge, and/or qualify disciplinary arguments; and
2. how to communicate this thoroughly and thoughtfully in a well integrated essay.

Shortcuts to the Analysis:

Four questions for evaluating evidence may be simplified into the acronym **PROP**[27]:

Primary or secondary evidence?
Reason to distort evidence?
Other evidence supporting this evidence?
Public or private funding?

Another similar shortcut is the acronym **MARKER**:

Find the **M**ain point

Locate unstated **A**ssumptions and value judgments
Identify types of **R**easoning
Ask **K**ey questions about the types of reasoning
Identify and evaluate the **E**vidence
Think of any **R**elevant information

Still another provides the **STAR**[28] system for evaluating evidence:
Sufficiency;
Typicality;
Accuracy; and
Relevance.

■ Testing the Literature: A Comprehensive Set of Questions (see also Appendix Part 2 Checklist for Analyzing Arguments)

Rhetorical Situation

Author

1. What are the author's qualifications and background (social class, age, sex, job experience, education)?
2. Is the author an authority in the area under discussion? Is the author an authority in an area but not in the one he or she is discussing? If so, is the opinion valid?
3. Does the author's present position prevent him or her from being completely objective, provide him or her with more recent data on the subject or an inside view, or prevent him or her from stating all the facts?
4. Does the author speak theoretically or has he or she had direct experience? Is the author's experience applicable to others? Is the author's experience outdated?
5. Is the writer's voice and tone appropriate to the rhetorical situation?
6. What principle of structure or organization is at work in the essay?
7. What is the function of each paragraph in terms of the purpose and thesis of the essay?

Audience

1. What does the author assume about the disposition of the audience?
2. About the knowledge and attitude of readers? How do you know? (Reconstruct from internal or external evidence.)

Purpose

1. What is the primary purpose of the essay? Any auxiliary purposes?
2. What was the time, place, and occasion of the original publication (or current printing)?
3. What historical background or other contextual matters are relevant?
4. What is the author's concern with the subject? Is it an attempt to persuade, provide facts, protect a moral investment, make money, gain notoriety, etc.?
5. What is his or her social, commercial, or political vantage point?
6. What motives or vested interests might color the author's arguments?

Style

1. Are there any special techniques that contribute to the writer's style: unusual vocabulary, unusual syntax, rhetorical questions, parallel structures, repetitions, metaphors, and similes? How do they shape thought?
2. How does the writer establish his or her reliability and trustworthiness?
3. Where does the writer employ logical, ethical, and emotional arguments?
4. Why were these details chosen by the writer? And what do they say about the subject?
5. Are there words that make value judgments (indicating good or bad, right or wrong), especially adjectives, and thus suggest the author's point of view?

Content/Evidence

Students should be able to distinguish between facts and opinions, the objective versus the subjective, empirical data and logical argument, emotional appeals and logical ones. Controversial and even familiar assertions should be verified.

Content rests on assumptions. Assumptions are often hidden or unstated, taken for granted, yet influential in determining the conclusion, and necessary if the reasoning is to make sense (see also p. 132 on inferences and assumptions). In addition, assumptions can be potentially deceptive. Students should look for assumptions in moving from reasons to conclusions. A logical option is to find the assumptions behind explanations in order to know what the other person is thinking or in order to evaluate his or her position. Assumptions are identified often by asking explainers to fill the gap with his or her own explanation. Moreover, any assumption should be tested against students' own common sense, their sense of reasonableness. What are students' value preferences in this controversy? What is their tentative position on this issue? What constitutes appropriate evidence and logic? Students may wish to read critics or reviews of works in question.[29]

Thinking requires observation to determine facts and imagination and reasoning to link the facts with explanations, and conclusions. Students can be taught to look for cue words[30] for identifying some elements in an argument. For example, in finding the conclusion of an argument, they can look for words such as "therefore," "so," and "thus." If that does not help, then they can ask themselves, "therefore what?" A fair and honest argument is not always the most persuasive argument, yet it remains a standard for sanity. For those who are more conscious of how feelings and reasoning operate in themselves and others, a sound argument is a persuasive argument. And what are the standards for a sound argument? A sound argument is a clear statement of a claim supported by true evidence, true statements, and valid reasoning.

1. What is the thesis, stated or implied? What are the issue and the conclusion? What are the reasons?
2. What constitutes appropriate evidence and logic? What kinds of evidence are used? Are they accurate?
3. Is important information missing (missing definitions, missing premises, or conclusions)?
4. Can any false, contradictory, or irreconcilable information be detected?
5. Do authors say this directly or by implication, that is, by suggesting something beneath the surface?
6. How do the details influence the opinion authors want readers to form about the subject?
7. What words or phrases are ambiguous?
8. Does the author define ambiguous words?
9. What are the descriptive and definitional assumptions?
10. What are the value conflicts and assumptions? How do they shape the evidence and the conclusions?
11. Are there any flaws in the reasoning? Are there any alternative causal explanations? What alternative conclusions are consistent with the writer's strong reasons?
12. Do any facts seem misleading?
13. Are any unjustifiable emotional appeals used--innuendo, name calling?
14. Are central generalizations and assertions of opinion adequately qualified and supported by reasoning, evidence, examples?
15. Are the limits of the position vulnerable to being pushed to the extreme (reduced to absurdity)?
16. Does the writer acknowledge or seem to understand the other side of the argument? Is the other side represented accurately? What has been left out or suppressed? What significant information is omitted? Do authors play up arguments favorable to their side? And play up arguments unfavorable to the other side? Do they apply "clean" words to their side and "dirty" words to the other? Are there flaws on the writers' side that correspond to the faults they have pointed out in the opposing position? (Listening to Rush Limbaugh is an object lesson.)
17. Is there a fair balance of all the evidence?

Research Design

Subjects/Sample

1. Who was studied? Was there sampling bias (a sample of convenience)? Are particular groups singled out because they are available: College students? Was the study marred because the experimental group was not a perfect match for the control group? For example, if the experimental group is made up of volunteers who may be highly motivated, the volunteers might not be comparable to a group of non-volunteers. What does payment do to subjects' behaviors?
2. If there is empirical evidence, how representative is the sample? Check on its size, breadth, and randomness. If it fails on any of these dimensions, the sample may be biased, and you will have identified a hasty generalization.
3. How good were the numbers? Generally, the more subjects used in a study and the longer its duration, the more authoritative its findings. Judge the value of statistical versus practical significance.

Rival Hypotheses

Many kinds of facts are open to rival hypotheses (see Appendix Part 2 on the argument, explanation, and hypothesis), including clinical case studies, criminal trials, research studies, advertising statistics, airline crash findings, and historical events. Experts can examine the same facts and come up with different hypotheses to explain them. Although many explanations can "fit the facts," some seem more plausible than others. Most authors will provide you with only their favorite hypothesis--one that is subject to many biases; rival hypotheses must be generated by the critical reader. Generating rival hypotheses is a creative process; usually such hypotheses are not obvious. Thus, the ability to generate hypotheses varies. Even the best researchers frequently fail to acknowledge important alternative hypotheses for explaining their findings. The worth of a particular hypothesis is inversely related to the number of plausible rival hypotheses.

In comparing rival hypotheses, apply the following criteria:

1. their logical soundness;
2. their consistency with other knowledge that is available; and
3. their previous success in explaining or predicting events.

Some common effects that confound results when generalizing causally are

1. observer expectancy effects;
2. maturation and life experiences over time;
3. biased sample selection;
4. participant expectancy and desire to please;

5. linked causal influences; and
6. regression effects.

Methods and Materials

The most reliable results come from prospective studies in which researchers control the food, drug, or activity throughout the study. If a study is retrospective, researchers depend on self-reports of past behavior. Memories can distort or fail which can result in faulty causal analyses (post hoc reasoning).

1. Were researchers looking forward or backward?
2. Were there any other material fallacies?
3. Were the measurements valid?
4. Did the writer accurately measure what he or she claimed to measure? Carefully compare the kind of measurement with the characteristic that is being generalized about.

Statistical Treatment

1. What is the basis for the statistical treatment?
2. On what numbers are any percentages based?
3. When you have absolute numbers or see impressively large or small numbers, what percentages would be useful to know before you interpret the statistics?
4. Is the mean, mode, or median the most accurate reflection of the average?
5. Is it important know the range and distribution of scores?
6. Are there any faulty statistical comparisons?

Results/Conclusions

1. Is important information missing? (key definitions, alternative techniques for gathering or organizing the evidence, effects of what is advocated and of what is opposed, graphs or data[31])
2. Form your conclusion from the evidence. Does it match the writer's? If it doesn't, something is probably wrong.
3. Are empirical generalizations justified to the extent that there is a bulk of reliable instances of some phenomena? (The greater the variability of the population, the greater the bulk needed.) The generalizations should fit into the larger structure of knowledge. There is a variety of instances consonant with the variety in the population. (A stratified population on relevant variables [if known] and unbiased sampling within the strata may be more efficient than a pure random sample or a pure systematic sample.) In any case, an extension is required beyond known portions of the population. Such an extension is called an "inductive leap."

Funding

1. Who paid for the research?
2. Is the underwriter/publisher reputable? What vested interests might be served by it? What organized financial, political, ethnic interests backed the advocated position? A recent study of oat bran was funded by Quaker Oats--not necessarily a disqualifier--but a good reason to withhold judgment until independent researchers corroborate its findings.
3. What do neutral/not-for-profit groups say? The media blitz satisfies the public's appetite for spectacular information, even though it may not be significant. Look for the less frequent proclamations from large institutions--the National Institutes of Health, the ACLU, the American Cancer Society, the ICC, the League of Women Voters, the American Heart Association, and so on. They often wait for significant agreement in the scientific community before issuing a statement.

■ Sample Controlled Research Assignment: Rhetorical Analysis[32]

As a warm-up we identify one representative article,[33] research study, or essay in our discipline, preferably one with an abstract. The abstract is temporarily removed, as is any information about the source of the piece. Students read the article and discuss it with respect to matters of claims, assumptions, definitions, quality of reasoning, detail, organization, diction level/tone, and so on. They distinguish between informative and descriptive abstracts (see p. 189) and write their own abstract--informative, descriptive, or both.[34] If the author has written an abstract, students then compare theirs to that of the author.

Next, we identify a major issue in our field, about which there are clearly defined differences of opinion as stated in two opposing articles. (For example, in the social sciences we might use the issue of cognition versus affect where two sharply divided camps argue for primacy.) The articles should have references, and abstracts are preferred, but not essential. If abstracts precede the articles, they are temporarily removed along with any information as to the source of the selected articles.

As before, students read both pieces carefully. They write abstracts for each, assuming the persona of the author and practicing the voice appropriate to the field and/or journal. If abstracts appeared originally with the work, a comparison is again made between students' abstracts and those of the two authors.

We choose relevant questions from the above comprehensive list that tests the literature. Students assess the trustworthiness of the material according to them. Instructions might read:

> You are now ready to evaluate the argument. Remember: The objective of critical reading is to judge the acceptability or worth of the different conclusions that can be reached concerning an issue. Making these judgments prepares you for forming a rational personal opinion--the ultimate benefit of asking the right questions. Read the essays at least twice. Use these questions to evaluate what the writer is doing in the essay.

Then, using the answers to the questions, students write an essay evaluating the merits of the opposing arguments. They are instructed to

> Support one side or the other in a paper of *n* pages (5 to 7 double-spaced pages are generally adequate). Explain why that particular viewpoint is the more reasonable, sound, accurate, in short, a stronger, more convincing statement by discussing what each side claims (content); and how effectively each side supports it (style). (Students now receive the actual citations of the two articles and must reference them in their Reference or Works Cited page.)

The assignment, however, carries with it these caveats:

1. Students may use only the two articles themselves for direct evidence. They may not go to any other sources listed in the reference list. But for the purposes of our assignment, they may consider these references secondary sources.
2. They must incorporate into their papers[35] from each article no more than
   A. 2 to 3 carefully chosen direct quotes;
   B. 2 paraphrases; and
   C. the ideas from 3 secondary sources.[36]
3. Optional: Students write an abstract of their own rhetorical analysis.

The remainder of ideas and details are theirs. Therefore, students must ask themselves: What evidence should I include?

This project may be undertaken intensively or more leisurely, interspersed with other activities over several weeks. We may use the guidelines in Appendix Part 2 to edit and evaluate Analyzing and Interpreting Nonfiction Prose.

■ Tips for Instructors: Controlled Research in Rhetorical Analysis

1. Identifying journal names and dates may give students access to the abstracts.
2. Abstracts are generally written in the passive voice, but journals in the field should be checked for style.

3. Students can also practice converting from one style of documentation to another, e.g., APA to MLA, Chicago, Turabian, etc.

Sample Disciplinary Controlled Research Assignments

Letters and Sciences

English

The use of writing that is called literary criticism is a form of rhetorical analysis, that is, using text to explain text. In the humanities, it becomes a way of relating texts to ourselves. The more deeply they relate, the better the work, and the more important the critique. Use these questions as a guide:

1. What is my reaction to the reading as a primary text?
2. What is my reaction as I analyzed the material?
3. What is the worth of any primary text?
4. How does it relate to my life?
5. How does it relate to life in general?
6. How does it go about relating to life experience?

History[17]

Apart from the other objectives, the objective in this program of study is for students to overcome the natural tendency to view global change solely from a Western vantage point. When cultures encounter each other for the first time, there are always at least two different human experiences.

To illustrate the Western-African interaction in Africa during the nineteenth century and the nature of historical analysis involving an encounter between American journalist Henry Stanley and African leader Mojimba in central Africa in 1877, students are given two one-page documents describing the same incident, a violent clash between Stanley's expedition and Mojimba's group of local inhabitants. Stanley's description of events pictures a group of brave pioneers savagely assaulted by cannibals. Mojimba's account describes an African welcoming party treacherously attacked by foreign invaders.

Students are asked to assume the role of a journalist with an international reputation for objectivity and detachment writing in 1877 for a newspaper with a similar reputation. Using only the two accounts, they must compose a one-paragraph/page account of the incidents that they will be satisfied to have appear on the front page. They cannot produce two accounts of the incident. (Students are forced to sift the probable from the improbable, to decide what is likely to be true.)

Psychology

Take a stand on the primacy of affect or cognition. In order to convince your readers that Lazarus (cognitive primacy) or Zajonc (affective primacy) holds the preferred point of view, analyze both papers to show how the position you oppose uses unconvincing or inappropriate techniques to argue its point, while the position you support uses reasonable and believable evidence. Use only the testimony cited in the articles. Consider the two papers that you read as primary sources. Consider the papers' references as your secondary sources.

The purpose of this paper is to see if you can:

1. quote directly;
2. paraphrase;
3. document primary and secondary sources;
4. avoid plagiarizing; and
5. say something meaningful of your own at the same time.

To do:

1. Give your paper a title.
2. Support your stand with **no** more than
   A. two **judicious** direct quotations from each author;
   B. two paraphrases from each author; and
   C. ideas from three **significant** secondary sources.
3. Remember that your paraphrased sections must be documented. In the margin, please note the paragraph (page and paragraph number) from which each instance of borrowed material came.
4. Write a one-paragraph informative abstract of your paper.
5. Use APA style for formatting your text (title, subheads--should you choose to use them), intratextual documentation, and references.
6. Limit your paper to between 5 and 7 pages.

Professions

Health Science: Taking Sides[38]

1. Author
2. Title
3. Briefly state the main ideas of the article
4. List three important facts that the author uses to support the main idea
5. Show how the article supports its side of the issue
6. Identify holes in its argument
7. What is a good counterargument to the thesis of the article?
8. What points could be added to its argument?
9. List examples of propaganda, bias, or faulty reasoning that you found in the article

Sample issues:
Are Chiropractors Legitimate Health Providers?
Is Yo-Yo Dieting Dangerous?
Should Doctors Ever Help Terminally Ill Patients Commit Suicide?

PLAGIARISM

Ideally, research papers should consist of information from sources blended judiciously with students' own interpretation and commentary. A research paper, documented on every major point, sometimes thoughtfully refuting the opinions of authorities, amplified by citing others when such citations are apt, should demonstrate intellectual mastery, honesty, and scholarly integrity. And there's the rub. Although we talk with students about whether to quote, summarize, or paraphrase and how to do it gracefully, we must demonstrate to them the importance of distinguishing between thine and mine.

Merely acknowledging that the source of an idea/words lies elsewhere does not automatically tell us where "elsewhere" leaves off and students begin. The techniques of quoting, summarizing, and paraphrasing provide ways of differentiating between students and others and differentiating between the mere duplication of other people's ideas (which Kinko's does with precision) and the use of them to advance ideas of students' own and of human knowledge in general.

The failure to document sources fully and precisely constitutes plagiarism. Plagiarism refers to using the work of other people without giving credit. It involves misinforming or misleading readers. They are in some way asked to believe that a writer's words or ideas are original when in fact they are borrowed from other sources.

Pleas of ignorance are obviously difficult to support in the face of advance warnings that we spell out in our course overviews and that appear in the *Brockport Handbook (*see Appendix Part 2). Those who set out to misrepresent, who copy and pass off as their own the writing of an author, another person, friend, or relative are committing an illegal act.

■ Standard Definitions

Plagiarize:	To steal or purloin and pass off as one's own, the ideas, writings, etc. of another). *Webster's New Collegiate Dictionary*
Plagiarism:	1. copying or imitating the language, ideas, and thoughts of another author and passing off the same as one's original work. 2. something appropriated and put forth in this manner. *American College Dictionary*
Plagiarism:	The wrongful appropriation or purloining, and publication as one's own of the ideas, or the expression of the ideas (literary, artistic, musical, mechanical) of another. *Oxford English Dictionary*

Derivation: Greek *plagios*: oblique, crooked, treacherous
Latin *plagium*: kidnapping
plagarius: kidnapper, plagiarist

There are several varieties of plagiarism. Individuals can plagiarize words, ideas, sentence structure, or arrangement. Plagiarism is sometimes the result of intent. Writers copy down all or part of a journal article or chapter from a book, making no mention of the original work or its author. Students who postpone writing their papers until the last minute, then type an article or parts of several articles and submit the copy-work without documentation as their own, plagiarize intentionally.

At other times, plagiarism is the result of laziness, carelessness, or ignorance. Much plagiarism is at least partly unintentional. Some students have not learned how to incorporate legitimately other people's words or ideas into their own writing. They may be ignorant of or confused about the proper way to document sources. Naive students who summarize without documenting because they think summaries in their own words need not be footnoted unintentionally plagiarize. Unlike the abstract, summaries are often embedded in larger text. We usually don't see plagiarism in summaries because the occasions for writing them are conventionally agreed on. Students are merely "translating" someone else, whereas plagiarism involves passing someone else's words or ideas as their own.

Other inadvertent plagiarism begins with note-taking. Students simply become careless while taking notes and forget to identify a direct quotation as such. Furthermore, the notes that are largely plagiarism-by-paraphrase soon become copy-work as phrases from the source language slip in. If these paraphrases are presented to give the impression that they are the student's work, then he or she is guilty of plagiarism. Failing to type a footnote number after a quote is plagiarizing innocently. Careless omission of quotation marks in notes often means inadequate documentation in the final paper.

Because students are largely confused about what exactly plagiarism is, we must spend some time explaining its nature. We can pull material from the notes below.

■ **Introduction For Students** (see also Lyn Parson's "On Plagiarism" in Appendix Part 2)

Plagiarism is presenting someone else's ideas in a paper as your own. Appropriating the ideas of others is theft, as surely as stealing their wallets--a sort of mugging of the intellect--legally called plagiarism and punishable by law. The "someone else" could be your roommate, great-uncle, or TV commentator, or the author of an article in a magazine or book.

But mere documentation does not insure you against plagiarism. Facts not generally known, ideas, critical theories, opinions, and insights that you have taken from a source (including, on occasion, class lectures) must be clearly credited to that source. Even single words or phrases that are particularly illuminating, language which would not have occurred to you without the source, may not be sprinkled in without benefit of citation.

Good intentions do not constitute an adequate excuse for plagiarism or a convincing defense when plagiarism is detected. Unfortunately, the results of intentional and unintentional plagiarism may be the same. Plagiarism has consequences, sometime severe. Departments are empowered to assign you a failing grade for the course. You may be expelled from the department of your major. Plagiarism may be recorded in your permanent college transcript. You may be unable to graduate. (In other words, you are liable to expulsion from school.) If the material you plagiarized is copyrighted (almost everything in print is), you are liable to criminal prosecution as well. In short, plagiarism is a serious academic, moral, and legal offense.

These are not pleasant words. There is nothing pleasant about plagiarism. Full, honest documentation requires that you tell your readers exactly what sources you used in writing your papers and exactly how you used them. You must mention the sources that contributed to your paper and make the nature of the contribution clear. Did you borrow an idea from the source? Did you borrow any words as well? You do not need to document bits of common knowledge, but you do need to document almost everything else--not only direct quotations but also any facts, ideas, or insights you gained from a particular source.

Since the point of higher education is to add other people's ideas to your own, plagiarism would seem to be what you are supposed to be doing here. And thereby hangs the problem: How do you do what you are supposed to be doing and not do it at the same time?

There is nothing academically or intellectually disrespectable about using the ideas of other people. In fact, that is what a college education is about--learning how to make use of the knowledge and techniques of the past or present. When we ask you to write a paper or report, you are generally not being asked to be original. You are, instead, being asked to master a certain body of information, analyze it, and come to some conclusions about it.

If every source is to be so carefully documented, you may well ask, what is the research paper but a chain of quotations? The answer is that an effective research paper or critical essay is not a litany of quotations but an *assimilation* of material from sources. The material has to be penetrated, condensed, filtered, arranged, and interpreted and so bears the stamp of your intelligence.

■ A Few Hard Truths about Plagiarism for Students

- College undergraduates do not--nor are they expected to--write with the polish of professionals. Your instructors are generally trained to read conscientiously student writing in their field and are more sensitive to distinctions in your writing like "too good" or "too different." Such a paper, therefore, immediately arouses our suspicions.

- By the same token, we know that most of you are not capable of changing your style overnight. (For most of you improvement in writing is so gradual that we often doubt you are learning anything.)
- We spend a lot of time talking to one another, trading advice and papers. That's another reason why you often get caught when you try to pass off someone else's writing as your own.
- The only way you can safely plagiarize is to use a source that is no better than what you could do yourselves. So why then should you take risks with someone else's ideas when you can safely take risks with your own?
- At the very least, outright misrepresentation of someone else's ideas as your own can easily be avoided by simply naming their source: "As John Kenneth Galbraith/Uncle Max/Jacob Bronowski once said, . . ." That may become clumsy, boring, and annoying, but it will keep you out of academic trouble.
- It should be of some comfort to undergraduates along the way that no one expects you to be absolutely original. Other people's material can remain theirs, and you can still think about it and write about it.[42]

■ Tips for Faculty: Avoiding Plagiarism[39]

Probably the preeminent guard against plagiarism in the long run is for students to practice reading a passage, closing the book, and then writing about it. Students may wish to imagine explaining the information to a friend. The thinking behind this is that whatever they remember by and large constitutes an acceptable paraphrase. Another idea is for students to read on their topic but not take any notes for writing a paper. When they need additional information, they may use only what they remember.

Other Ideas:

1. Control topic selection for papers. Provide a list of topics for students to choose from and change the list frequently.
2. Specify the criteria by which you will grade.
3. Set a date at which time students must hand in a tentative abstract or paragraph about their papers before they start writing them.
4. Require a trial bibliography early in the process. Next to each item, students note the call number and its location in the library.
5. Specify the format of the paper, and don't allow students to deviate from it. Clear instructions not only reduce plagiarism but also direct students to think more about the subject of the paper instead of the paper's neatness.

6. Hold your ground against complaints about the campus library from commuter students. They should learn to use an academic library, and their hometown public library is usually an inadequate substitute.
7. Limit internet sources.
8. Don't allow last minute changes in topics. An eleventh-hour desperate need for a paper--any paper--is probably the most common cause of plagiarism.
9. Ask students to duplicate pages from which cited material was drawn.
10. Better yet, sequence your research assignment. Require that you look at notes and drafts during the term paper writing process. Break up a paper into several short sections which students turn in at appropriate intervals. Make clear to students that you will not accept a paper that you haven't seen being written.
11. Give an in-class, open-ended, and impromptu test just before papers are due to assess students' knowledge of the material in them. Ask students to summarize, explain the thesis or implications of the subject. This not only weeds out those who aren't doing their own work but also helps students assimilate the material they have been working on.
12. With their final papers, require students to submit a large manila envelope that contains all annotations, drafts, notes, and outlines. Do not accept a paper that does not have its full set of originals attached.
13. After the class discusses correct research techniques, have students sign a statement: "I have read and understood the plagiarism statement that appears in the college handbook."[40]

✍ *Exercise*

Here is a passage from Walter Allen's *The English Novel* (New York: Dutton, 1954), p. 223:

> "*Wuthering Heights* is the most remarkable novel in English. It is perfect, and perfect in the rarest way: it is the complete bodying forth of an intensely individual apprehension of the nature of man and life. That is to say, the content is strange enough, indeed baffling enough, while the artistic expression of it is flawless."

Which of the following passages constitute plagiarism and why?

1. The most remarkable novel in English is *Wuthering Heights.* It brings forth an individual apprehension of the nature of man and life; therefore, it is perfect in the rarest way. The artistic expression is flawless, but the content is strange, indeed baffling.
2. Walter Allen insists upon the extraordinary quality of *Wuthering Heights.* In this novel, he maintains, Emily Bronte makes an extremely personal comment on the

human situation by using an impeccable novelistic framework to present her strange and mysterious characters and plot.

3. *Wuthering Heights* is a great English novel. It is perfect in the rarest way; it provides an individual apprehension of man's nature. The artistic expression is flawless, although the content is strange and baffling.

Types of Plagiarism

Word-for-Word Plagiarism. After devising part of a first sentence, the writer copies directly from the source and fails to acknowledge it.

Original[41]

It is not generally recognized that at the same time when women are making their way into every corner of our work-world, only one percent of the professional engineers in the nation are female. A generation ago this statistic would have raised no eyebrows, but today it is hard to believe. The engineering schools, reacting to social and governmental pressures, have opened wide their gates and are recruiting women with zeal. The major corporations, reacting to even more intense pressures, are offering attractive employment opportunities to practically all women engineering graduates.

Plagiarism

Because women seem to be taking jobs of all kinds, few people realize that only one percent of the professional engineers in the nation are female. A generation ago this statistic would have raised no eyebrows, but today it is hard to believe. The engineering schools, reacting to social and governmental pressures, have opened wide their gates and are recruiting women with zeal. The major corporations, reacting to even more intense pressures, are offering attractive employment opportunities to practically all women engineering graduates.

Original[42]

There is little doubt that Essex saw himself in something of a hero role. He was fed up with his brothers' inability to act. In the Navy he tried to form a coalition of blacks, but it failed. He was surrounded by bitter, militant men who only talked of taking action. Essex wanted to take the talk to what he considered the logical conclusion: praxis. So he began to look toward the black heroes of history who had *done* something: Eldridge Cleaver, Malcolm X, Nat Turner, W. E. B. Dubois, and even the terrorist Kikuyu Mau Maus who tried to drive European settlers out of Kenya during the early 1950s. These men

Plagiarism

Essex saw himself in something of a hero role. He was fed up with his brothers' inability to act. He was surrounded by bitter, militant men who only talked of taking action. Essex wanted to take the talk to what he considered the logical conclusion: praxis. So he began to look toward the black heroes who had done something: Eldridge Cleaver, Malcolm X, Nat Turner, W. E. B. Dubois, and even the terrorist Kikuyu Mau Maus who tried to drive European settlers out of Kenya during the early 1950s. He wrote their names on the walls of his apartment. He identified with them, and like them wanted became Essex's ego-ideals. He wrote their names on the walls of his apartment; he identified with them, and like them, he wanted to be the master of his own destiny.

to be the master of his own destiny. These men became Essex's ego-ideals.

To document these passages accurately, writers should

1. return the sentences to their original order;
2. type the passage into the paper as a display quote (i.e., indented, single-spaced);
3. insert ellipses where words have been deleted; and
4. put a note number at the end of the quote and its corresponding citation at the end of the paper or the bottom of the page, or create an internal citation.

Plagiarism at the Sentence Level[43]

Original: It is safe to assert that the much criticized....
Plagiarized: One can safely say that the oft-criticized....

Original: The Court obtained its being as a result of Locke's....
Plagiarized: The Supreme Court really owes its existence to the Lockeian....

Original: insistence upon the separation of powers...
Plagiarized: insistence that powers in government be kept separate...

Original: the crystallizing forces of Locke's writing
Plagiarized: Locke's writing crystallizing existing opinion

Plagiarism By Paraphrase. In this case the writer follows the movement of the source, but substitutes words and sentences. Paraphrasing is restating the original in different words, usually sentence-by-sentence to clarify the meaning of the original. A paraphrase is often but not always about the same length as the original. However, the distinction between summary and paraphrase is not as important as developing an awareness of the difference between paraphrase and semi-conscious plagiarism. Putting some of the author's ideas into your own words does not cancel your debt. You still owe your source for ideas.

Original

It is not generally recognized that at the same time when women are making their way into every corner of our work-world, only one percent of the professional engineers in the nation are female. A generation ago this statistic would have raised no eyebrows, but today it is hard to

Plagiarized Paraphrase

Few people realize, now that women are finding jobs in all fields, that a tiny percentage of the country's engineers are women. Years ago this would have surprised no one, but now it seems incredible. Under great pressure, believe. The engineering schools, reacting to social and governmental pressures, have opened wide their gates and are recruiting women with zeal. The major corporations, reacting to even more intense pressures, are offering attractive employment opportunities to practically all women engineering graduates.

engineering schools are searching out women, and big companies are offering good jobs to practically all women who graduate with engineering degrees.

Original[44]

There can be no question, I think, that Shakespeare saw the story, in its swift and tragic beauty, as an almost blinding flash of light, suddenly ignited and as swiftly quenched. He quite deliberately compresses the action from over nine months to almost an incredibly short period of five days: so that the lovers meet on Sunday, are wedded on Monday, part at dawn on Tuesday and are reunited in death on the night of Thursday.

Plagiarized Paraphrase

Shakespeare seems to have viewed the entire story of Romeo and Juliet as one of the astonishing swiftness and beauty, like a sudden, very bright flash of light. The entire story takes place over a very short period of time, five days. In five days, the lovers meet, are married, are parted, and are finally reunited in death. The entire story happens in a flash, suddenly ignited and quickly exterminated.

To document these paraphrases correctly, the writer must either provide a citation at the end of the paraphrase and/or insert an internal citation at the beginning of the passage.

Mosaic Plagiarism. The mosaic lifts words or phrases from the source but does not document them. Even if the words or phrases are rearranged, the mosaic is still plagiarism. Simply rearranging the order of words in the sentence or sentences in a paragraph is not paraphrasing: It is just misquoting and failing to acknowledge the fact that they are someone else's words. In the example below, the plagiarized phrases are listed below the mosaic copy. Here the writer lifts phrases and terms (italicized) from the source and embeds them in his or her own prose.

Original

It is not generally recognized that at the same time when women are making their way into every corner of our work-world, only one percent of the professional engineers in the nation are female. A generation ago this statistic would have raised no eyebrows, but today it is hard to believe. The engineering schools, reacting to social and governmental pressures, have opened wide their gates and are recruiting women with zeal. The major corporations,

Mosaic Plagiarism (also a summary; for more on plagiarized summaries, see below)

The *pressure* is on to get more women into engineering. The *engineering schools* and *major corporations* have *opened wide their gates* and are recruiting women *zealously*. *Practically* all women engineering graduates can find *attractive* jobs. Nevertheless, at the moment, *only 1 percent* of the professional engineers in the *country are women*.[45]

reacting to even more intense pressures, are offering attractive employment opportunities to practically all women engineering graduates.

Original

There is little doubt that Essex saw himself in something of a hero role. He was fed up with his brothers' inability to act. In the Navy he tried to form a coalition of blacks, but it failed. He was surrounded by bitter, militant men who only talked of taking action. Essex wanted to take the talk to what he considered the logical conclusion: praxis. So he began to look toward the black heroes of history who had *done* something: Eldridge Cleaver, Malcolm X, Nat Turner, W. E. B. Dubois, and even the terrorist Kikuyu Mau Maus who tried to drive European settlers out of Kenya during the early 1950s. These men became Essex's ego-ideals. He wrote their names on the walls of his apartment; he identitifed with them, and like them, he wanted to be the master of his own destiny.

Mosaic Plagiarism

Marc Essex got tired of seeing the black man's impotence and was frustrated by the *bitter militant men who only talked of taking action*. He wanted to carry their ideas to their *logical conclusion: praxis*. So Essex cast himself in the *hero role*, became *master of his own destiny* by taking as his *ego-ideals* the *black heroes of history who had done something*.

It is not enough to copy, delete, drop a word here and change a word there. To document the mosaic, the writer would have to put every borrowed phrase in quotation marks and cite the author at the end of the passage. Overdone, it makes for a patchwork of quotes and quotation marks. When most of what you want to say comes from a source, either quote the entire section or paraphrase and provide a citation.

Plagiarism by Summary.[46] A summary is a short version of an original passage. It may state the major points and omit the supporting details, or it may state a few supporting details in a way that implies the major points. Like the paraphrase, the summary owes its ideas and details (though not the words) to the source, so summarizing without documenting may also be considered plagiarism.

Original

It is not generally recognized that at the same time when women are making their way into every corner of our work-world, only one percent of the professional engineers in the nation are female. A

Plagiarized Summary

As women enter the world of work it is hard to believe that only one percent of the professional engineers are women. Engineering schools and major corporations, yielding to governmental generation ago this statistic would have raised no eyebrows, but today it is hard to believe. The engineering schools, reacting to social and governmental pressures, have opened wide their gates and are recruiting women with zeal. The major corporations, reacting to even more intense pressures, are offering attractive employment opportunities to practically all women engineering graduates.

Original[44]

Death itself is not an obsession with Wordsworth, nor does his quest primarily involve an attempt to find some reconciliation to the fact of death (as does that of Shelley, Keats, Yeats, or, for that matter, the Shakespeare of the sonnets). The great lines in the closing sonnet of The River Duddon: "We men, whom in your morn of youth defied / The elements, must vanish / be it so," are not bravado. They are real acceptance, even though that acceptance is not placid or joyous. But what is not accepted, and is a constant "trouble" to his "dreams," is man's isolation from nature while he lives. The quest for permanence, in so far as Wordsworth is concerned, should be regarded as a quest for a certain kind of stability and reassurance while we are alive.

Original

There is little doubt that Essex saw himself in something of a hero role. He was fed up with his brothers' inability to act. In the Navy he tried to form a coalition of blacks, but it failed. He was surrounded by bitter, militant men who only talked of taking action. Essex wanted to take the talk to what he considered the logical conclusion: praxis. So he began to look toward the black heroes of history who had *done* something: Eldridge Cleaver, Malcolm X, Nat Turner, W.E.B. DuBois, and even the terrorist Kikuyu Mau Maus who tried to drive European settlers out of

regulation, are opening their doors to women.

Legitimate Summary

As David Perkins points out in *The Quest for Permanence*, Wordsworth, unlike Shelley and Keats, is not principally concerned with finding a way to accept the fact of human mortality. He is able to reconcile himself, genuinely and sincerely, to death; but he cannot reconcile himself to humanity's estrangement from nature (35-36).

Plagiarized Summary

Wordsworth, unlike Shelley and Keats, is not principally concerned with finding a way to accept the fact of human mortality. He is able to reconcile himself, genuinely and sincerely, to death; but he cannot reconcile himself to humanity's estrangement from nature.

Plagiarized Summaries

Fed up with blacks' inability to improve conditions through talk or coalition, Essex adopted black men of action, like Cleaver and Malcolm X, as his role models.

or

Frustrated by his unsuccessful black coalition in the Navy and by his brothers' militant, bitter, and idle talk, Essex took Cleaver, Malcolm X, Dubois and others as role models. He wrote their names on his

Kenya during the early 1950s. These men became Essex's ego-ideals. He wrote their names on the walls of his apartment; he identified with them, and like them, he wanted to the the master of his own destiny.

apartment walls and wanted to control his own life as they had controlled theirs.

To document the plagiarized summaries correctly, the writer must either document at the end of the summary and/or insert an internal citation at the beginning of the passage.

CHAPTER 7
RESEARCH PROJECT OR CRITICAL/ANALYTICAL PAPER

It is a question of what is appropriate *versus what is* available. *Many of our students are lazy. Like survey researchers, they gravitate to the art of the* available *simply because it is there.*
Sarah Liebschutz

The purpose of research is to introduce students to the modes of inquiry of their field. Research in its typical academic sense also means accessing information and ideas that are someone else's. A research course and/or research paper is a preeminent opportunity for students to practice marshaling data and consolidating knowledge about the form, style, organization, research methods, and bibliographic format of professional papers in their field. They become familiar with the specialized journals and other materials in their major and sites of scholarly presentations.

Students build on prior library experiences, learning to use the specialized indexes of their discipline and other reference tools such as data-based searches. But at the upper division, research is usually not meant to be a simple position paper on a disciplinary issue. The job in writing major papers for upper-division undergraduates is mainly to take what their sources say and explain them to the world, push them farther, discuss their implications, argue against or for them, and draw some conclusions. So, such research is meant to be a thoughtful critique of that issue, dealing with conflicting opinions, pointing out assumptions, analyzing someone else's phenomena, evaluating the merits of the evidence or the structure of an argument (see Chapter 6). It is at the upper-division level that writing in the major becomes more public and therefore more serious: serious for graduate school, for publication, for a professional life.

In a research paper students generate a focused thesis and sustain their argument or line of reasoning over extended prose. Students choose their own system for recording notes (notebooks, index cards, electronic databases)--so long as it is a system.[1] They should expect to practice careful contemplative, intentional thinking. They analyze, reason, and evaluate logically and/or argue convincingly. Students should be able to bring together material from several sources that can be built into a well-integrated paper, not simply a chain of citations. It is in the research project that students practice moving back and forth between full paper, a half- or one-page abstract, a trial thesis, and a title. They practice extracting the most important facts and turning them into a two-page paper to be read quickly, or writing a comprehensive critical paper more leisurely.

However, although research papers are an important form of academic writing, many instructors shy away from assigning them because of the work to undertake the process and evaluate the writing

--with its dead ends, opportunities for plagiarism, and shallow and specious thinking. None of this is new to Brockport faculty.

> The problems associated with research papers are that students are reluctant to think ideas through critically. They exhibit lapses in reasoning and ignore research that challenges their theses. They cannot determine the truth value of information or reconcile conflicting research. They don't know how to choose a topic manageable for the extended length of a critical paper,...how to conduct research or write over the protracted and unstructured time that this work often requires, or how to satisfy the varied methodological or intellectual demands of their department--an innocence of which their professors may be unaware.[2]

If the axioms and processes that define disciplinary discourse are not openly clarified and if its specialized conceptual and stylistic strategies are not addressed, students can only grope in the dark for answers. This chapter hopes to short stop some of this by looking at the way in which our research prompts are written, the piecemeal process with which research may be undertaken, and the cumulative way it may be evaluated. Emphasized are techniques for evaluating sources, for introducing authorities, and for addressing the complexities of an issue. Some formats may be new to students: the executive highlight, the descriptive versus the informational abstract (see Chapter 6), the use of white space and subheads, and the literature review (as a discrete entity or woven throughout the paper).

To comfort students along the way, undergraduate research papers are not expected to be the final arbiter on an issue or phenomenon. No one on our side of a Phi Beta Kappa key or a doctorate should expect our students to be original. Brockport is after all a college where they are supposed to be learning what we already know. What we want to see is their mastery of disciplinary knowledge. They make it their own by virtue of their own thinking about it. And they demonstrate that mastery by writing about it. That demonstration is what we grade.

THE RESEARCH PROCESS

■ Relationship Between Research Purpose and Design[3]

Research Purposes: Examples from the Health Professions

To Explore

Prompts for Historical Research

1. Trace the history of national health legislation and its impact on health education programs.
2. Trace the development of the concept of self-esteem from 1960 to 1990.

Prompts for Developmental Research

1. Examine the changes in attitudes/behaviors regarding alcohol use from adolescence to the legal drinking age.
2. Examine differences in the perception of social norms related to tobacco use from adolescence to adulthood.

Prompts for Action Research

1. Develop an in-service program to train counselors to meet the needs of sexually active youth.
2. Develop a program to increase staff awareness about the risk factors for alcohol use among youth.

Prompts for Case and Field Studies

1. Conduct an in-depth study of behavior patterns of preschool children.
2. Conduct an ethnographic study of an "inner city" school.

To Describe

Prompts for Descriptive Research

1. To detail students' knowledge and perceptions of [HIV].
2. Describe the risk-taking behaviors of adolescents.

Prompts for Correlational Research

1. Determine the relationship between self-esteem and risk-taking behavior.
2. Examine the relationship between an individual's use of marijuana and that of his or her peers.

To Explain

Prompts for Causal-Comparative Research

1. Identify factors contributing to child abuse.
2. Determine the attributes of effective health educators.

Prompts for Quasi- and True Experimental Research

1. Examine the effects of sexuality education on contraceptive use and STD rates.
2. Compare the effects of three different substance use prevention programs on the initiation of alcohol and other drug use and the perception of adolescent norms.

■ Designing Research Assignments

Our written assignments or prompts should accommodate the various phases of the writing process (see also Chapter 9 on Designing Writing Assignments). Our course assignment sheets should include interim due dates for students' Working Bibliography, Trial Thesis, Drafts, Abstract, and Final Paper. Beginning writers are best helped by such a piecemeal procedure, while more accomplished writers increase their research proficiency. Furthermore, skill-building sequences can be designed to address curricular goals determined by the department.

However, students need reminding that the actual task of preparing a research report or critical essay is seldom divided into the neat categories that we itemize. The steps overlap and certain ones are recursive--repeated and intertwined with other steps as the work progresses. As students write, they may discover gaps in their data and may need to revise their thesis and/or rearrange their ideas.

Actual Work Schedule Over a Semester

1. Trial topic (choosing and limiting the topic)
2. Trial title, thesis, and/or explanatory paragraph
3. Starter bibliography

2 weeks Submit

4. Literature review (reading and notetaking)
5. Possible problems (e.g., quality of data)
6. First public draft of paper
7. Outline or organizational plan
8. Working bibliography

3 weeks Submit

9. Next draft of paper
10. Check for nonsequitors, overgeneralizations, flawed reasoning, unprofessional tone, etc.
11. Arrange/rearrange order of sections, paragraphs
12. Return to the literature review, as necessary
13. Adjust outline or organizational plan

4 weeks Peer Review

14. Adjust proportions of various sections to the whole paper
15. Adjust order and clarity of sentences
16. Check for coherence, conciseness
17. Write abstract/executive highlight
18. Check for correctness: final editing and proofing
19. Check for accuracy and completeness of documentation

2 weeks Submit

Bill Reed asks students to count backward from the due date of the research according to their academic work habits, allowing for procrastination, incubation, the arrival of materials requested by the library's Inter-library Loan Department, and so on.

■ Select Research Formats[4]

Short Cut Research Format

- What I know
- What I need to know
- How I find out
- What I found out

Which translates loosely to a standard but simple research form:

- Title and abstract (a brief summary of hypothesis, etc.)
- Need
- Purpose
- Procedure
- Results and conclusions

Basic Format for Experiments, Empirical Research, or Research Proposals[5]
(see The Scientific Method section in Appendix Part 2)

Introduction	Identifies the problem, the purpose of research, what led students to this point
Literature Review	Sets context. Identifies relevant information, what is already known about it. Includes background, summary of related theories, its distinction from other studies, its importance
Hypothesis	Generates hypotheses, what students are trying to demonstrate
Design of Study	Tests hypothesis, how students intend to operationalize the hypothesis
Method	Step-by-step procedure, students' sample, how selected: controlled experiment, survey, case study, etc.; how the independent variables are to be manipulated; students' materials
Treatment of Data	Provides statistical analysis
Results	Organize and analyze the findings, relating them back to the hypothesis, prediction, or question. State the conclusions about the relationships among the variables. Check to see how consistent the findings are with what is now known about the phenomenon
Discussion	Considers the significance of the findings: analysis, interpretation, evaluation
Conclusion	Implications, research still needed. The extent to which the findings can be used to predict other phenomena by designing new scientific procedures (e.g., new experiments); contribution the research makes

References	Credit sources and provides additional notes or explanations; uses standard bibliographic form
Appendix	Raw data, copies of questionnaires, any special materials, etc.

■ Finding Topics

Chuck Edwards suggests that students thumb through their textbooks, their lecture notes, and/or their own notes. What gets them angry? What do they pause over? What is incomplete? What do they wonder about? What is fuzzy? What is wrong? They should think about not what they know but about what they want to know. Students should read without worrying about understanding everything. They should identify a single idea or concept, occurrence, approach, phenomenon that is an exemplar. Students should become an expert on something over which they can exercise a measure of control.

Students may also build on any of the issues derived from their naturalistic observation assignment (see Chapter 5). At bottom, students should ask themselves if they can live with that topic for several weeks of intensive work.

The most common error in student research is selecting a topic so broad that little short of a dissertation would do it justice. Students should distinguish between a *topic* and a *focus*. We need to warn them against topics that are too faddish, too specialized (out of their league), or data that are too remote to find literature on. It is easier to stay unified with a topic that is too narrow than one that is too broad (see autism chart below). If students' topics are too broad, they are forced into a hasty, superficial, or incomplete treatment. For example, rather than attempt a project on the 1960s, students should look at a small corner of it. Consider the assassination of Lee Harvey Oswald. On second thought, students can write about the childhood of assassin Jack Ruby and its impact on the murder. On third thought, they may write about Ruby's schooling and its impact on him as a killer.

Example of a Focusing Exercise

Communism	*We cannot write a small paper on Communism. Give me an aspect of Communism that is more manageable.*
Loss of Freedom	*Still too large: Give me part of the loss of freedom in Communism.*
Loss of Religious Freedom in the Communist Way of Life	*A smaller part of it.*
Closing Churches to the Public No community of worshippers No place to worship No home for ministers to preach	*OK.*

Example of Delimiting a Thesis: Autism[6]

Field	Much too broad	Still too broad	Too broad	Controlling question
Psychology	Autism	Description of autistic children	Symptoms of autistic children and emotionally disturbed children	What are the major theories explaining autism? How well do the symptoms fit the theories?
Sociology	Autism	The role of autistic children in society	Autistic children in different societies	Why or why not are autistic children found in all social classes and in all societies?
Political Science	Autism	Autistic children in the U.S.	Laws about the schooling of autistic children	What impact on local school budgets has the required education of autistic children had?
Education	Autism	The education of autistic children	The behavior of autistic children in the classroom	What do the characteristic emotional and cognitive symptoms require in remedial teaching?

■ Prospectus or Preliminary Design

Students submit a preliminary design that includes a trial title, thesis, explanatory paragraph, and a list of potential sources on which a working bibliography is built.[7] Note that students need to skim actual materials to do this. Encourage them to check other college or university libraries in the area if a source that interests them is not available at Drake.

Gathering Data. **Primary sources** are, for all intents and purposes, not mediated by anyone or thing. When published, such research and studies are considered original because they use original sources or raw data (interviews, observations, diagrams, or artifacts, experiments; documents such as diaries, personal notes, letters, and so on). Case studies and any of the above first-hand experiences are forms of original research that majors can undertake.

Secondary sources are interpretive. They are works *about* a person, phenomenon, etc., further filtering the material that comprises primary sources. Secondary print sources include both popular and scholarly material. Both may be considered serials or periodicals, publications that come out on a regular basis. Students search the topic using specialized encyclopedias, scholarly journals, and books in the field; specific indexes and computer data bases; newspaper or general magazine articles (which we may want to limit); proceedings of meetings; government documents; electronic sources: computer-assisted research, world wide web sites, the internet, and CD-ROM. It is up to us to identify the primary research tools of our respective fields. Unless we specify an historical approach,[8] students should search the most recent sources for state-of-the-art data.

THE LITERATURE REVIEW

One of the best ways for students to arrive at their focus is through a literature review. Reviews of the literature refer to surveys of research relevant to a particular subject or question. The word *literature* in this context means the previous published scholarly or scientific work on a topic. As an entire article or chapter the literature review surveys ideas and findings relevant to a specific topic, providing the specialist with a comprehensive view of it, usually to the present time.

The purposes of the literature review are that it helps students trace the historical development of a subject. It helps them refine and/or limit their topic as they become knowledgeable on several aspects of it. Moreover, the review of the literature is analyzed, not just summarized; it must tell what scholars said and what it means in relationship to the topic--the contribution that each piece of information makes. The literature review serves as a backdrop for new studies or thinking on the subject. Literature reviews also help students and others interpret newer findings, so that issues can be reasonably supported or discredited. Put another way, literature reviews can resolve controversies. They help advanced students avoid duplicating established findings. Literature reviews can verify that the present idea is necessary and researchable. And they provide students with practice using print and electronic resources.

Literature reviews take several forms. They may appear in bits and pieces throughout a paper. Reviews of the literature often appear as an opening section of a scholarly report. In articles reporting original research, the review provides background for the current research, showing the gap in the research history that the current work tries to fill. Literature reviews are frequently published on their own merits, sometimes appearing as free-standing chapters or articles that have been fashioned into one flowing account.

■ Types of Reviews

1. The most common is the **state-of-the-art review**, in which students capture the most recent scholarly activity on a subject.
2. An **historical review** extends further back. How students know where to begin and when to stop is determined by the students' level of sophistication, by the quantity of research available, and by the nature of the subject itself. A chronological arrangement is best suited to this type of review.
3. **Comparative reviews** analyze and evaluate two or more philosophies, theories, constructs, trends, or movements from both primary and secondary sources. The paper

may reinterpret one theory in terms of another. It may be arranged item by item within two or more theories or whole theory by whole theory.

4. Another type of review looks at the literature with the aim of **building** a theory or model.

■ The Annotated Bibliography

An annotated bibliography provides a precise or distilled summary of the material covered in a book, chapter, or article. It uses the standard bibliographic format for the respective field, to which a brief description is added. It is often no more than 50 words but sometimes less than a sentence, which then becomes its thesis.

Examples

Vonnegut, Kurt, Jr. *Welcome to the Monkey House.* New York: Fall, 1976.

> A collection of short stories and essays published in magazines between 1950-1968. The collection includes some science fiction, and both the fiction and the non-fiction demonstrate the consistency of Vonnegut's troubled but nonetheless bemused vision of contemporary insanities. Of special interest to those concerned with the development of Vonnegut's style.

Hendrick, Grant. "When Television is a School for Criminals." *TV Guide* (January 29, 1977), pp. 5-10.

> Anecdotes and the results of a survey conducted among 208 inmates in Marquette prison. Ninety percent have used or plan to use MO's from TV police dramas, but less than 15% report being influenced to commit acts of violence by something they saw on TV.

■ Print and/or Electronic Sources (in stunning disarray)

It is up to us to identify the primary research tools of our respective fields and clarify any limitations. Trade magazine pieces, usually written by popularizers, may be unacceptable to some of us. We may send students to special resources in order of increasing depth and technical expertise:

Popular materials include nonfiction books, biographies, newspaper and magazine articles. Examples of trade magazines: *Scientific American*, *Forbes*, *Wall Street Journal*, *Science Digest*, *Harvard Business Review*, *Popular Science*, *Popular Mechanics*, *Psychology Today*, *Fortune*, *Business Week*; and bestsellers like *An Anthropologist on Mars* by Oliver Sachs. Citations for them are furnished through the *Reader's Guide to Periodical Literature* or *Books in Print*.

Specialized Encyclopedias: *Encyclopedia of Philosophy, Encyclopedia of Rhetoric and Composition, Encyclopedia of Educational Research, International Encyclopedia of the Social Sciences* may be adequate places for students to **start** their research, but they should not be relied on.

Indexes include *The Education Index, Art Index, Social Science Index, Business and Technology Index, ERIC, Abstracts of English Studies, Science Citation Index, Women's Studies Index, Ulrich's International Periodical Directory, Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), Index Medicus, Book Review Index*, and *American Statistics Index*.

Abstracts include *Social and Behavioral Sciences, Sociological Abstracts, ERIC Dissertation Abstracts, Social Work Research and Abstracts, Child Development Abstracts, Dissertation Abstracts*, and *Psychological Abstracts*.

Scholarly material includes academic, learned, or scientific books and journals on topics usually written by academics, scientists, and other professionals. They take the form of reports of studies, tests, questionnaires, surveys, literary or historical analyses, proceedings. They are also found in government documents, microfilm/fiche, abstracts, annotated bibliographies, atlases, directories, yearbooks, electronic sources, and journals such as: *J Atmospheric Science, J Applied Meteorology, PMLA, AATSP Hispana, ART Bulletin, ART News, American Anthropology, American Ethnologist, American Historical Review, J of American History, Design for Arts in Education, Research in Dance, Dance Perspectives, Therapeutic Recreation J, J of Leisure Research*.

Sample Literature Review Collection Sheet: Data Based

I. Author
II. Title
III. Source
IV. Year
V. Volume
VI. Pages
VII. Purpose(s) of Study
VIII. Research Questions
    A. Hypothesis #1
    B. Hypothesis #2
IX. Research Design
X. Instrumentation
    A. Type
    B. Reliability
    C. Validity

XI. Population/Sample
  A. Size
  B. Composition
XII. Statistics
XIII. Results/Conclusions
  A. Finding 1
  B. Finding 2
XIV Recommendations
  A. Implication 1
  B. Implication 2

Sample Literature Review Collection Sheet: Non-Data Based[9]

Author(s):
Title:
Source:
Year:
Volume:
Pages:
Book Title:
Publisher:
Purpose(s) of Article/Chapter/Book:
Conclusions:

Students' critical reviews traditionally end up reading like book reports. Similar to quote after quote, reviews often suffer from *chaining*, the linking of study after study demonstrating no evidence of synthesis of the material by content, concept, or trend. Effective literature reviews not only show the accumulation of knowledge on a subject but also analyze or use a review as a platform for writers' own ideas and/or the practice of critical interpretation.

Examples of Literature Reviews

Professional: Suicidal Adolescents

Each year many adolescents feel the desperate need to end their lives. In 1970, the suicide rate for adolescents and young adults aged 15 to 24 years was 8.8 deaths per 100,000. This figure jumped to 12.3 deaths per 100,000 in 1980. According to many analysts, however, the true figures are more than double that amount (Lipkins, Mizrucki, Pfeffer, & Plutchik, 1988). Despite these alarming findings, the research on the social factors contributing to adolescent suicide is limited at this time.

The social relationships that an individual has were found to be a contributing factor in the self-destructive behavior of a suicidal adolescent (Peck, 1987). As reported by Peck, "A number of committers [sic] communicated their concern over the nature of recent social encounters..."(p. 865). Among these concerns were broken or strained relationships or the loss of a significant person in the individual's life.

Carlson and Cantwell stated in 1982 that the depression found in suicidal adolescents may not always have a clear cause. While there are those who believe the depression to be caused by an affective disorder, it may well be the result of social pressures (cited in Apter, Bleich, Plutchik, Mendelsohn, & Tyano, 1988). Many psychiatrists, however, are quick to diagnose suicidal adolescents as having affective disorders (Apter, et al., 1988). In doing so, they overlook the possibility of social pressure being a factor in life-destructive behavior. Their stand is in contrast to that of Peck who found that a positive relationship between the two is plausible.

As stated before, the current research on the impact of social influences on adolescent suicide is limited. One question in this area that will be addressed is how the social ties of a suicidal adolescent differ from those of an adjusted adolescent. In other words, are the relationships that a suicidal adolescent hold weaker than those of his or her "normal" counterpart? This research will also try to refute the notion that an adolescent's suicide is always the result of an affective disorder. That belief held by many psychiatrists fails to take into account the influences that relationships have on adolescents in general....

References

Apter, A., Bleich, A., Plutchik, R., Mendelsohn, S., & Tyano, S. (1988). Suicidal behavior, depression, and conduct disorder in hospitalized adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*, 696-699.

Lipkins, R., Mizruchi, M., Pfeffer, C.R., & Plutchik, R. (1988). Normal children at risk for suicidal behavior: A two-year follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*, 34-41.

Peck, D.L. (1987). Social-psychological correlates of adolescent and youthful suicide. *Adolescence, 22*, 863-878.

Strosahl, K.D., Linehan, M.M., & Chiles, J.A. (1984). Will the real social desirability please stand up? Hopelessness, depression, social desirability, and the prediction of suicidal behavior. *Journal of Consulting and Clinical Psychology, 52*, 449-457.

Professional: Research on Writing Blocks, Writing Anxiety, and Writing Apprehension

Research by Lynn Z. Bloom and others uses the term *writing anxiety* to describe people who exhibit a cluster of attitudes, behaviors, and lack of knowledge about writing that creates writing problems. Using case studies and the Daly and Miller 26-item writing-apprehension scale, Bloom's findings corroborate Daly's that anxious writers "do not enjoy thinking about writing, the writing itself, or discussing their writing with others," or having it evaluated ("Teaching Anxious Writers" [1980b], p. 50). They are procrastinators, who may in fact write very well (contrary to Daly's view), but who have difficulty in organizing their papers and in giving sufficiently high priority to their writing tasks and time. According to estimates by Bloom, Daly, and Mike Rose, anxious writers comprise about 10 percent of the general student population--struggling with undergraduate and graduate papers, dissertations, and theses. Bloom found such writers in professional contexts as well, despite the predictions of Daly and Wayne Shamo that because of their negative attitudes toward writing, apprehensive writers would choose academic majors and occupations that involved little or no writing ("Academic Decisions as a Function of Writing Apprehension["] [1978] and "Writing Apprehension and Occupational Choice" [1976]) (p.72).

Reference

Bloom, L. Z. (1984). Research in writing apprehension. In M. Moran, & A. Lunsford (Eds.), *Research in written composition* (pp.71-91). Westport, CT: Greenwood Press.

Student Literature Review with Chaining

In researching peer evaluation, I found many reasons to support its use in the classroom. I will discuss the benefits of peer evaluation in these categories: audience, writing skills, and group communication. However, since there are so many criticisms of problems that arise in peer groups, I have found an alternative method that produces the same results.

James Moffett is one of the pioneers in the field of peer evaluation. He is one to note the importance of audience to student writers. Moffett believes that there is not a natural feeling between student and teacher in the evaluation process. The teacher is not the student's natural audience; his peers are.

Peter Elbow's teacherless writing class also supports this. A teacher's evaluation is an evaluation of a non-typical audience. It is also only one evaluation. Getting feedback from many different people is important. It gives the writer different alternatives and shows him how others interpret his writing.

Another advocate of peer evaluation, David James, also mentions the amount of feedback when discussing audience. He too believes that more feedback is better for the student....

Student Literature Review with Less Chaining

A lot of research has been done on the effects the word processor has on the writing process (Logan, 1988; McAllister and Louth, 1988; Sullivan, 1988; Teichman & Poris, 1988; Vockwell, 1988). Each researcher has concentrated on a specific facet of computers in the writing process. The National Assessment of Educational Progress has also done extensive research on the growth of competence with computers in both public and private schools.

Both Teichman and Poris (1988) and McAllister and Louth (1988) concentrate on the question of whether or not word processing can improve the writing skills of freshman in a freshman composition course. Although Teichman and Poris could not prove that using a word processor (from now on referred to as WP) improved writing skills, they did get positive responses from the students in a questionnaire. McAllister and Louth (1988) found a significant increase in the writing ability of those on the WP compared to those using the traditional method of composing.

Vockwell (1988) and Logan (1988) concentrated on the effects of word processing of junior and senior college students in advanced writing courses. Vockwell compared a control group, using traditional methods of writing to a experimental group using the WP. Vockwell found the experimental group spent less time on their writing assignments and more time revising in-depth instead of mechanics, spelling, and grammar. Logan did a case study of four of his students discovering that the students' belief in what they would get out of the class determined how much they improved on the WP.

The National Assessment of Educational Progress did a study called "Computer Competence: The First National Assessment" concentrating on the effects of race, sex, background, and region of the country had on students' (in grades 3, 7, and 11) competence with computers. All of these factors played a part in the amount of competence the student had.

Although all of these studies survey the effects computers have on writing ability, no surveys can be found to research the long term effects on writing skills and students' attitude toward the WP. Do students who have had courses that used the WP continue to use it or do they return to the traditional methods of writing? Do they feel threatened when using the computer or do they feel at ease? How does an introductory course to WP effect the writing skills of a student semesters after taking the course?

References

Logan, S. W. (1988). A study of four undergraduate computer-writers. *Collegiate Microcomputer, 6*, p. 135-146, 176.

McAllister, C., & Louth, R. (1988). The effect of word processing on the quality of basic writers' revisions. *Research in the Teaching of English, 22*, p. 417-427.

Sullivan, P. (1988). Desktop publishing: A powerful tool for advanced composition courses. *College Composition and Communication, 39*, p. 344-350.

Teichman, M., & Poris, M. (1988). Initial effects of word processing on writing quality and writing anxiety of freshman writers (Paper presented at the Annual Meeting of the Conference on College Composition and Communication). St. Louis, MO, March 17-19, 1988. (ERIC Document Reproduction No. ED 294 217)

Vockwell, E. L., & Schwartz, E. (1988). Microcomputers to teach English composition. *Collegiate Microcomputers, 6*, p. 148-154.

Tips for Students: Literature Reviews[10]

1. Select key words or descriptors related to your topic. Focusing should enable you to read not whole books but chapters or passages found via a table of contents or index.
2. In order to document trends and change more effectively, set limits to considerations of population, setting, time period, and other important variables.
3. Document enough sources to get a sense for the extent of work that has been completed. Examine the literature in related fields if none or little is found on your topic.
4. Use a variety of references and periodicals to obtain different perspectives on the topic. You may choose to discuss in detail only a few articles, only making reference to others to show that your search has been robust.
5. Take accurate notes with full citations, including full names.
6. Photocopy title and credit pages, tables of contents for journals and edited books, and the affiliation of contributors, so that you can state: Harvard psychologist Jerome Kagan or Xerox CEO George Fisher.
7. Discern the differences between primary and secondary sources: Primary source material is authored by the originator of the ideas or data; secondary source material is derivative, reporting the work of others, sometimes written by specialists called popularizers.
8. Distinguish between good and bad studies. Look for errors and omissions, sampling bias, sponsoring group bias, and so on. Evaluate the design of the empirical research, the importance of nontechnical information, the relevance of the material, the conclusions (see Controlled Research: Testing the Literature in Chapter 6).

9. When writing the literature review, resist chaining citations. Subordinate a chronological organization to a conceptual one.
10. Draft a sentence that captures the overall sense of the literature you are reviewing, perhaps a sentence using a subordinating clause to express a contrast within that generalization. This becomes your trial thesis.

■ Sample General Literature Review Assignment

You are required to search the literature to locate an article, report, or book published in the past ten years that adds to or newly develops one of the topics covered in this course. This paper should identify this addition or development clearly and elaborate on the way it contributes to the subject. It would do well for you to annotate the content of this new resource. Any critique of the ideas or research of the author is encouraged.

This assignment will be evaluated on the importance of the material in the new resource for understanding the subject matter of the source. The quality and accuracy of content, evidence of critical thinking, and organization of that thought is also central to evaluation. This paper should be between 4 and 7 typed pages. Points are subtracted for inaccurate spelling and grammar. This assignment may be submitted at any time during the semester, so long as it is handed in by the last regular class session. Time permitting, you may be asked to report on the material to class members.

■ Sample Disciplinary Assignment: Veterinary and Animal Sciences[11]

In this exercise you are expected to demonstrate your familiarity with the current literature on X.

1. **Sources:** You will derive the information from a minimum of five articles in primary scientific source or referred journals. Texts, trade journals, and popular magazines are inappropriate sources for scientific writing. Do **not** review review articles. You may use professionals in the field and members of the animal science community of scholars.
2. **Format:** The only headings are those that identify the paper and the reference section.
3. **Contents:** The literature review will contain four major sections, only the last of which normally gets its own heading. Subheadings are not usually needed but may be helpful in some cases.
    A. The introduction should give readers a clear sense of the extent, background, and significance of your topic. It is not a summary but rather a means of providing a context for what is to follow.
    B. The review of the literature section should be your own synthesis of the material (not a paraphrase or restatement of the articles). Your paper should show the relationships between various approaches and findings. Point out relevant similarities and differences in methodology, data, conclusions, etc.
    C. The conclusion should include a relevant restatement, your own observations, and the work remaining.
    D. The literature-cited section starts on a separate page and must conform to the *Journal of Animal Science* bibliographic style.

THE RESEARCH DRAFT

Taking Notes

As students read on their topic, students begin to learn who the main players are. The most influential authorities are normally not hard to find because they are continually cited. Articles in collected works, specialized encyclopedias, and the like are often written by persons knowledgeable on the content of the field and its leaders or senior scholars. They also cite other luminaries. Students should read their work. In the drafting process, students get practice in abstracting the most important details and translating jargon/academese into direct and natural subject/verb/object statements.[12]

Tips for Students: Note-Taking

1. When taking notes, record full bibliographic references first.
2. If you can afford it, make copies of the material you wish to use.
3. Record page numbers as you take notes--not only for quotations, but for all useful data.
4. Put quotation marks around direct quotes *as* you take notes. Use ellipses (. . .) to omit unimportant material.
5. When not quoting directly, paraphrase or summarize--in your own words (see Chapter 6).
6. Never use a mixture of your words and those of the author. The result will be plagiarism. It will also be embarrassingly obvious because your style will not match that of your author.

Example of a Research Report Outline

Students prepare intermediary drafts adjusting focus, evidence, organization, and proportion--weighing parts of the report. Here is an opportunity for students and/or peers to assess their own work, possibly using the following guidelines:

Cover Sheet

Name:
Date:
Title: Post War Rise of Russia
Type of Report:
Thesis: The leniency and misconceptions of FDR at Yalta enabled Stalin to hold on to Soviet claims and to gain new concessions from the West.

Second Page: Outline

Background/Introduction

Policy of Leniency
Misunderstandings by Allies
Territorial Consolidation
Europe
Asia
New Concessions
Economic
Geographic
Political

Third Page: Abstract/Executive Highlight

Fourth Page: Body of Research

Subheads	Sections by Paragraph
Background	Text...
Policy of Leniency	Text ....
Misunderstanding by Allies	Text ....
Territorial Consolidation	Text ....
Europe	Text ....
Asia	Text ....
New Concessions	Text ....
Economic	Text ....
Geographic	Text ....
Political	Text ....

Last Page: References

■ Tips for Students: Drafting the Research Paper

1. Begin the rough draft in essay form. If you are not certain what to begin with, begin anywhere. You should complete the whole draft in one sitting no matter how coarse, fragmented, or aimless it might feel.
2. From the start, focus your reader on your subject. Use your opening to make your context and purpose as concrete as possible.
3. Select the key terms that run through your material. Use the same specialized vocabulary throughout so as not to confuse readers.

4. Cut and staple any direct quotes (from xeroxed copies to insure accuracy) into the hard copy of your text, leaving room for transitional sentences, medial summaries, and organizational shifts.
5. Use the passive voice judiciously. Make people--like the authorities you refer to--the subjects of sentences.
6. If clarity of your paper could be served by headings or subheadings, create them.
7. Conclude with implications, questions for further research, or whatever is consistent with your purposes and the discourse of your field.
8. Your paper need not be empty of informal writing: personal experience, folk wisdom, an anecdote. Check with your instructor.
9. Put the finishing touches on the paper:
    A. Identify the appropriate level of formality.
    B. Check for appropriate style and tone at the word level.
        i. Write results of studies in *past* tense.
        ii. Refer to related theories in *present* tense.
        iii. Refer to implications in *future* tense.
    C. Check for correct syntax.
    D. Use formatting (subheads, white space, etc.).

■ Term Paper Editing Guide for Students

Title:
Text:

1. Concrete support
    A. Amount and quality of details
    B. Authoritative sources
2. General coherence (logical)
    A. Clear thesis, related to all sections
    B. Smooth transitions
    C. Correct balance
    D. Appropriate organization
3. Writing style
    A. Clear
    B. Concise
    C. Emphatic
4. Intratextual documentation
    A. Quality
    B. Amount (too much, not enough)
    C. Smoothness
    D. Form

5. References
   A. Sources meet requirements (books, journals; relevance, recency)
   B. Correct content
   C. Correct number
6. Mechanics (spelling, punctuation, grammar)
7. Correctly typed
8. Outline
   A. Content (logical, related to thesis)
   B. Order
   C. Mechanics (numbers, indentation)
   D. Style (parallel structure, consistency of phrases or sentences)
   E. Format
9. Format
   A. Subheads
   B. White space
   C. Tables/Figures/Graphics

■ Research in the Natural Sciences: Scientific Writing[13]

Science provides general laws about what always happens under certain specified conditions. Experimental studies, the most rigorous, seek to control extraneous variables while determining the effects of selected independent variables (those that can be manipulated) on selected dependent variables (those that are observed to see whether they are affected by the intervention). But this orthodox science or scientific method is not the only way of acquiring knowledge. Case studies and ethnographic studies are forms of applied research that seek to explain phenomena through an in-depth analysis of single cases. Correlational studies is another form that tries to determine the amount and nature of commonality among phenomena.[14]

In science, writing is the quintessential means of communicating any of these research findings. Scientists share their ideas and results with other scientists, encouraging critical review and alternate interpretations from colleagues and the scientific community. In most cases, scientists report the results of their research activities in scientific journals in a rather standard format, outlined below:

A scientific paper usually includes the following parts: a **Title Page** (statement of the question or problem), an **Abstract** (short summary of the paper), an **Introduction** (background and significance of the problem), a **Materials and Methods** section (report of exactly what you did), a **Results** section (presentation of data), a **Discussion** section (interpretation and discussion of results), and a **Literature Cited** section (books and periodicals used). Each section should be clearly labeled.

Title Page and Title. The title page is the first page of the paper and includes the title of the paper, the course title, your lab time or section, your instructor's name, and the due date for the paper. Normally, the title page also includes the author's name. The title should be as short as possible and as long as necessary to communicate to the reader the question addressed by the paper. For example, if you're investigating inheritance patterns of the gene for aldehyde oxidase production in *Drosophila melanogaster*, a possible title might be "Inheritance of the Gene for Aldehyde Oxidase in *Drosophila melanogaster*." Something like "Inheritance in Fruit Flies" is too general and "A Study of the Inheritance of the Enzyme Aldehyde Oxidase in the Fruit Fly *Drosophila melanogaster*" is too wordy. "A Study of the" is superfluous, and "Enzyme" and "Fruit Fly" are redundant. The suffix-ase indicates that aldehyde oxidase is an enzyme, and most scientists know that *Drosophila melanogaster* is the scientific name of a common fruit fly species. However, it is appropriate to include in the title both common and scientific names of lesser known species. Note that when referring to the scientific name of an organism, the genus and species should be in italics or underlined. The first letter of the genus is capitalized, but the species is written in all lowercase letters; for example, *Drosophila melanogaster*.

Abstract. The abstract is placed at the beginning of the second page of the paper, after the title page. The abstract summarizes the question being investigated in the paper, the methods used in the lab, the results, and the conclusions drawn. The reader should be able to determine the major topics in the paper without reading the entire paper. Compose the abstract **after** the paper is completed. Use the past tense when writing the abstract, and give both the scientific and common names for the species investigated. Once the scientific name has been given in the body of the text, it does not have to be mentioned again.

Introduction. The introduction has two functions: 1) to provide the context (justification and purpose) for your investigation and 2) to state the question asked and the hypothesis tested in the study. Begin the Introduction by reviewing background information that enables the reader to understand the objective of the study and the significance of the problem, relating the problem to the larger issues in the field. Include only information directly related to the question investigated. Most ideas in the Introduction will come from outside sources, such as scientific journals or books dealing with the topic you are investigating. All sources of information **must be referenced** and included in the Literature Cited section of the paper, but the introduction must be in your own words. Refer to the references when appropriate; references should include sources other than the class text. Unless otherwise instructed, place the author of the reference cited and the year of publication in parentheses at the end of the sentence or paragraph relating the idea--for example (Einnerty 1992) or (Smith and Jones 1975, Dole 1991).

As you describe your investigation, include only the question and hypotheses that you actually investigated. Briefly (in one or two sentences) describe your experimental or observational methods. Although these items are usually presented after the background information near the end of the Introduction, you should have each clearly in mind before you begin writing the Introduction. It is a good idea to write down each item (question, hypothesis, prediction) before you write your Introduction. When writing your Introduction, try to present the rationale for your work. In other words, how do the methods relate to the objectives? Finally, write the Introduction, as well as the Materials and Methods and Results, in past tense.

Materials and Methods. The Materials and Methods section describes your experiment or observations in such a way that they may be repeated exactly. The majority of the information in this section will come from the handout for the lab, but in the paper this information should not be a list of steps but prose. Be sure to include levels of treatment, numbers of replications, and control treatments, if any. Do not include failed attempts unless the technique used may be tried by other investigators. Do not justify your procedures in this section.

Always begin your Materials and Methods section with the date and location of the exercise. Location should include specific locality, county, and state, such as: SUNY Brockport campus, Monroe County, New York. For field exercises, always include a habitat description.

If you describe an experiment from a lab manual or handout, do not simply refer to the procedures as described by the instructor. Write these procedures concisely, but in paragraph form. The difficulty comes as you decide the level of detail to include in your paragraphs. You must determine which details are essential for the investigator to repeat the experiment. For example, if in your experiment you incubated potato pieces in different concentrations of sucrose solution, it would be unnecessary to explain that the pieces were incubated in plastic cups labeled with a wax marking pencil. In this case, the molarity of the sucrose solutions, the size of the potato pieces and how they were obtained, and the amount of incubation solution are the important items to include.

The final paragraph of the Materials and Methods section should include a brief description of any statistical methods used in the study.

Results. The Results section usually consists of three components: 1) one or more paragraphs that describe the results, 2) figures (graphs, diagrams, pictures), and 3) tables. Remember to number figures and tables separately but consecutively throughout the paper. Refer to figures and tables within the paragraph as you describe your results by using the word Figure or Table, followed by its number (e.g., Figure 1). If possible, place each figure or table at the end of the paragraph in which it is cited. **All figures and tables must have proper legends clearly explaining what any symbols are about.** Also, figures and tables cannot stand alone. In other words, each figure or table must have accompanying text that explains its significance.

If you have performed a statistical analysis of your data, include this in the Results. Report all statistics in the following format: (symbol for test statistic = value, degrees of freedom, probability). For example: (t= 3.451, df = 45, $P < 0.01$). Report your data as accurately as possible. Do not report what you expected to happen! Finally, **do not discuss the meaning of your results in this section.** Tell whether your hypothesis has been confirmed true or false.

Discussion. The Discussion section is where you analyze and interpret the results of your experiment. You should state your conclusions in this section. Do not use the word *prove* in your conclusions. Your results will support, verify, or confirm your hypothesis, or they will negate, refute, falsify, or contradict your hypothesis; but the word *prove* is inappropriate in scientific writing. Use the past tense when referring to your own work or to the results of others; however, the present tense can be used when referring to what organisms of biological systems do. In order to write a decent discussion, you will have to refer to relevant, published studies other than your text. What you should attempt to do is place the results of your work in context.

Complete your Introduction and Results sections before you begin writing the Discussion. The figures and tables in the Results section will be particularly important as you begin to think about your discussion. The tables allow you to present your results clearly, and graphs allow you to visualize the effects that the independent variable had on the dependent variables. Studying these data will be one of the first steps in interpreting your results. As you study the Introduction and your data in the Results section, write down relationships and integrate these relationships into a rough draft of your discussion.

The following steps may be helpful to you as you begin to organize your discussion:

1. Restate your question, hypothesis, and prediction.
2. Answer the question.
3. Write down the specific data, including results of statistical tests.
4. State whether your results did or did not confirm your prediction and/or support or negate your hypothesis.
5. Write down what you know about the biology involved in your experiment. How do your results fit in with what you know? What is the significance of your results?
6. List weaknesses that you have identified in your experimental design. You will need to tell the reader how these imperfections may have affected your results.
7. List any problems that arose during the experiment itself. Unforeseen difficulties with the procedure may affect the data and should be described here.
8. Having completed this list, integrate all of the information into several simple, clear, concise paragraphs.

■ Grant Proposal Format

Students may use the following format to draft grant proposals. They will, no doubt, need to omit or re-order sections according to the actual grant application format.

Why?	*The Problem* General background Specific, established need Related research
What?	*The Objectives* Overall Specific
How?	*The Method/Procedures*
When?	*Time-Line*
Where?	*Location*
For Whom?	*The Audience* Male/Female, Career/Profession, Students/Parents, Alumni, Academic Community, etc. Number
With What?	*The Resources* Personnel: sponsors, supporters Facilities *The Costs* Financial Time Other
Why?	*The Benefits* To stipulated recipients To larger public To sponsors and helpers

■ General Research Paper Prompt and Evaluation Guidelines

Topic: Take a stand on a controversial subject in X.
Length: 8-12 typewritten pages. In addition, a title page, outline, endnotes, and references are required.
Due: At the start of class on X.

Grade: The term paper grade is worth X of the course grade. Half of the term paper grade is based on the process and half is based on the completed product (see list following).

1. Process Grade
   Title:
   Topic selection:
   Revised topic:
   Starter bibliography:
   Term paper proposal:
   Thesis statement:
   First rough draft:
   Revisions:
   Outline:
   Abstract:

2. Completed Paper
   Abstract:
   Outline:
   Endnotes:
   References:
   Text:

Samples of Disciplinary Research Projects

Letters and Sciences

Anthropology[15]

Human Territory: Tribal, Family, and Personal

Using the article, "Territorial Behaviour" excerpted from Desmond Morris' book, *Manwatching: A Field Guide to Human Behaviour*:

1. Write a brief, objective precis/abstract.
2. Write a two-page doubled-spaced summary.
3. Devise experiments which may be critiqued for clarity, focus, soundness, and population variables.
4. Generate a final report.

Biology[16]

To produce a complete lab report in the form of a research paper, you must include:

1. Field observation of gray squirrel behavior
   Report summarizing observations
   Table presenting results
   Definitions of behavioral categories

2. Lab exercise: Color Perception of Honeybees
   Products
   Introduction, materials and methods

3. Lab exercise: Assortative Mating in Soldier Beetles
   Products
   Results, discussion

4. Lab exercise: Foraging Efficiency and Predation Risk in Gray Squirrels
   Products
   Results, discussion

5. Full report
   Products
   Abstract, introduction, materials and methods, results, discussion

Biology: Biochemical Preparations

Objectives: Designed for students to gain practice in
1. Using scientific literature
2. Using laboratory techniques of isolation and analysis
3. Writing a scientific paper

Procedure
1. Prepare one of the following biochemical substances:
   cholesterol
   creatine
   creatinine ZnCl2
   cystine
   glycogen
   uric acid
   tyrosine
   urea
   glucosamine HCl
   protoporphyrin IX
   glucuronic acid
   dimethylester

2. Steps
   A. Review the literature on methods of isolation and assay
   B. Prepare the substance from a biological source
   C. Analyze and prove the isolated material
   D. Complete the written analysis

3. The written report is comprehensive coverage of the pertinent information placed under these subheadings:
   A. History or Introduction
   B. Chemistry (properties, reactions, synthesis, etc.)
   C. Distribution in Biological Sources
   D. Methods of Isolation
   E. Methods of Determination (Qualitative for identification, and quantitative for assay)
   F. Physiological and Biochemical Relationships

G. Pathological Variations
H. Special Problems with Substance
I. Bibliography (20 to 30 references)
J. Appendices

4. Use standard scientific format to present the experiment
    A. Explain the data
    B. Express the data in tabular or graphic form
    C. Take the relevant history into account in describing experiments
    D. Explain population growth, bacterial growth

Mathematics

Mathematics is integrated into culture--past, present, and future--in a variety of ways. Find a mathematical topic of interest, research it, and write a paper according to the following guidelines:

1. Typed and double-spaced;
2. At least 5 pages; and
3. At least 3 sources, cited according to APA or MLA standards.

The paper should not merely paraphrase library sources; it should attempt to ask and respond to a question, present several contrasting viewpoints about it, or take a position and defend it. Try to think of a topic that interests you. Here are some possibilities:

mathematics and religion
mathematics and art
mathematics and music
mathematics and biology
infinity
pi
paradoxes
perfect numbers
Islamic art and mathematics
numerology
puzzles and card tricks
Pythagoreans
soap-bubble geometry
Koenigsberg Bridge problem
population growth
transcendental numbers
prime numbers
Pascal's triangle
fibonacci numbers
African mathematics
computational systems
flexagons
four-color problem
golden section
topology
paper folding
M.C. Escher
4th dimension

You will be graded on:

1. Content. The quality of the topic and information gathered, the points made, and the thoughts conveyed, that is, what you say.
2. Mechanics and style. The quality of the presentation (logic, flow of ideas, grammar, sentence structure, punctuation, word choice), that is, how you say it.
3. Resources. The appropriateness of sources and accurate citations.

You will also be graded on a five-minute presentation on your topic.

Psychology: Psychometrics

1. Students design a simple test of intelligence.
2. They test it on 10 students.
3. They discuss in writing the results, any procedural and ethical problems, as grounds for skepticism about such tests.

Professions

Health Education: Principles and Philosophy[17]

A Contemporary Health Problem that Health Education Intervention Can Solve

Part I. Introduction: State the need, rationale, and purpose of the paper

Part II. Review of Literature: Discuss specific factors and barriers; apply a theoretical framework to the intervention

Part III. Recommend a health education program

Nursing: Lead Poisoning in Children[18]

Content
Causes:
Definitions:
Incidence:
How measured:
Symptoms, treatment:
Governmental controls:
Literature review, history:
Prevention\implications\education:

Structure
Introduction/conclusion:
Annotated bibliography:
Logic:
Flow:
Coherence:
Focus:
Graphics:
Quality and quantity of detail:
Subheads:

Mechanics
Documentation
    Style:
    Syntax:

Recreation and Leisure[19]

The graduate program requires its students to undertake empirical research or a scholarly investigation culminating in either a master's degree or a substantial paper.

Describe a therapeutic recreation or recreation and leisure services management-related research problem to be solved or question to be answered. Indicate why it is interesting to you, what is already known about the problem or question, and how you might scientifically go about seeking a solution or answer.

Read the attached article. Identify the thesis and subordinate topics. Then write a critique of the article. Summarize the author's conclusions, paying special attention to the relationship between the problems or questions noted and the solutions or answers provided. Refer to the source(s) on which the author bases his or her conclusions (i.e., pertinent literature, original scientific investigations, etc.).

Examine the reasoning and logic underlying the article. What relationships exist between the evidence offered and the conclusions reached. Are key definitions clearly presented? Is a theoretical or conceptual base explicitly stated? Are key definitions clear? Is the quantity and quality of the evidence satisfactory? Are the author's assumptions reasonable? Are the arguments adequate, flowing logically and compelling by appealing to reason and not emotion?

What are the implications of the article as a whole. Are conclusions discussed in comparison to existing knowledge? Are practical implications drawn? Are future directions for inquiry offered?

CHAPTER 8

ACADEMIC FORMS OF WRITING:
THE PROFESSIONAL STATEMENT AND THE ESSAY EXAM

Anyone who is a serious student of anything has cause enough to write.
Anon

Essays do, in a way, resemble scientific writing: they report experiments in thought.
Lewis Thomas

THE PROFESSIONAL STATEMENT

The professional statement is the place where thinkers come to terms with their own work. For students professional statements sum up in their own words how they envision themselves with respect to their major. Students prepare a personal philosophy, which serves as a vehicle for synthesizing their learnings and provides a base for career planning as well as for graduate school applications.

Professional statements may be completed at the beginning of a course or a course of study and repeated in light of the course content at the end of the semester or just before graduation. Students select, name, organize, and explain the coherent body of knowledge, ability, or attitude they are willing to claim as the most important result of their being a particular major. Their responses could include some statement about the kinds of skills they believe they have: How do they think about the topic? Their response might also include the names of texts and a rationale for their selection. Why are they favorites? What holds them together?

An older paper might be rewritten. Students can pick a paper they did some time ago and rewrite it for the purposes of this assignment. This means that they should address the same topic and the same problems from the point of view of who they are now (vis a vis knowledge, ability, and attitude). Students can write a preface or an afterword to accompany the rewrite--with, perhaps, commentary on the original version, the rewrite, and the differences between the two. Students should turn in a copy of the old paper along with the rewrite.

■ Sample Assignments for Students, Generally[1]

1. In the largest sense, the goal of this course of study is to provide you with the opportunity (and the responsibility) for achieving conscious control over your resources as an X major. Your course readings,

discussions, and writing assignments have been sequenced so that you will spend some time looking back over what you have accomplished and some more time looking ahead to see how much you can still get done--how much more you can learn, how much sense you can make of the courses you have taken, how much use you can make of the knowledge and abilities you have accumulated. The content of this course, then, is X as a field of study; the process of the course is your process of discovering and articulating your relationship to that content area.

2. You are working to master one of the [social or behavioral sciences]. This exercise should help you define for yourself what exactly it is that you are doing. Explain what you think your discipline is all about and, more important, locate yourself in relation to it. Explain yourself as a member of your profession: what your plans are professionally or why you wish graduate study; what your qualifications are; what your academic and research interests are; what your strengths are--even your weaknesses.

   Some specifics to help you along:

   1. commitment to helping people
   2. ability to handle personal problems/maturity
   3. communication skills--oral and written
   4. receptivity to criticism
   5. sensitivity toward others
   6. industry
   7. other

   It should be no more than two double-spaced typed pages.

■ Sample Assignment and Responses: Physics[2]

Assignment

You are working to master the discipline of physics. Choose a law or principle that is important to you as a physicist and imagine yourself in the position of wanting to explain to a nonphysicist, to someone indeed who does not even know mathematics, why this law or principle is important in your field. What should you say? (Speak in this part of your paper directly to the person you imagine you are addressing.)

In the second part of your paper look back at what you've said. What kind of job do you think you've done? What do you think you explain well? What do you not explain so well?

Finally, and this is the most important part, on the basis of your experience in this assignment with both your explanation and your evaluation of your explanation, how do you define the discipline of physics?

Student Response

The discipline of physics is the science of dealing with the properties, changes, and interaction of matter and energy. I couldn't explain this very well using the Second Law of Thermodynamics because I couldn't use any math. Still I think I did a rather good job because I believe the laymen ought to know the importance of the idea of entropy. Also time is tied up with increasing disorganization, which is important. All in all, I hope the layman I'm speaking to can see how the Second Law of Thermodynamics is a cornerstone of the discipline of physics.

Instructor Response

This paragraph is typical of the writing here as a whole. As a draft, the paper might have been valuable. What's really annoying about your passing it off as finished work, however, is that you don't seem even to *care* that you display in it a very cheap understanding of physics as a subject, a discipline, a system. Don't waste your time correcting the paper. If you want to revise it, rewrite it. I'd be glad to hear what you have to say.

Student's Revised Response

What I think I did well in my explanation of the Second Law of Thermodynamics was explaining that it has to do not only with the laboratory concept of heat transfer, but also with such universally important things as temperature, time, and the ultimate fate of the universe. Because I couldn't use math, and because my own knowledge is limited, what I don't think I did so well was to explain just *how* it is connected with these things. To do that, not only would I have to teach the nonphysicist math, I'd have to teach him everything I know about physics--and probably a lot more besides. In fact, for a nonphysicist to completely understand how the Second Law of Thermodynamics is important in my field, he'd have to become a physicist. I'd define the discipline of physics then as a way of "dealing with the properties, change and interaction of matter and energy," but in a system in which any one thing is connected with all other things in such a way as to be completely understandable only to someone who knows his way around the system.

Instructor Response

Now you're talking--and as somebody I can have a conversation with. You've discovered something very important to understand, not just about physics, but about all science. You've earned the right to take another step--which I hope a conversation with the attached can help you with (essay entitled: "Synectics: The Development of Creative Capacity" by William J. Gordon in which he talks about turning Euclidean geometry on its head in order to see other ways of interpreting the human experience of space).

■ Example of Strong Professional Statement: Psychology

When I returned to college in 1994, after five years away from academic pursuits, I was convinced I was where I should be. Beginning with my first few courses I was motivated to learn more and experience more than I ever thought possible.

At that time I was majoring in Psychology, but after taking a Sociology course my second semester, I changed my major. The major I chose was Sociology/Psychology, for any attempt on my part to understand individuals must also consider their environment and their relationship to that environment. Thus began the journey that has brought me to this point in my academic career.

Shortly after re-entry to college life I was employed as a Prevention Specialist for the Tompkins County Drug and Alcohol Administration. It was in this capacity that I got my first taste of teaching and public presentation. Then as now I enjoyed preparing lessons and presentations and felt especially satisfied when the concepts I was communicating were understood and grasped. My duties as Prevention Specialist have included research and preparing and presenting inservice programs to teachers and a variety of other professionals who work with drug and alcohol problems. These opportunities have been the catalyst for my desire to teach, write, and be involved in research.

In the fall of 1996 I was involved in two projects which I found rewarding and instructive. In addition to my work-related experience, I had the opportunity to do an independent research project and to assist a professor in another research project.

The independent project was a study of the relationship between stress and illness that was developed and carried out in partnership with my wife, a psychology major at Cortland. In April of 1997, we presented our research at an undergraduate social science conference at Gettysburg College. We also submitted a revised version of this paper to the undergraduate competition at the fall meeting of the Pennsylvania Association of Sociologists at Pennsylvania State University. I found these experiences to be among of the most rewarding of my undergraduate work.

The second project, in which I was a research assistant to Dr. Robert A. Rath was equally rewarding. I prepared a 52-page paper on the demographics of Tompkins County for another sociology course called Population Studies. Dr. Rath then revised and edited this paper, and it was issued as one of a series of working papers on the demographics of western New York counties for The Center for the Study of Regional Issues in the spring of 1997. Copies of both papers are submitted with this application.

In both cases I was introduced to skills that I believe will be helpful as I pursue my graduate studies. Through these experiences I have gained more than I could have done with just classroom experiences alone. The hands-on research I have done has been an influence in my decision to continue my education. Where classroom experiences gave me a foundation of theory, my research experiences have shown me how those theories can be applied.

I am certain of my goals. I want to teach, write, and perform research. I am looking for a program that offers excellent educational and research opportunities. I am presently still employed by the Monroe County Drug and Alcohol Administration and have been involved in some private consulting work. When I am accepted into graduate school, I will make appropriate decisions regarding my employment situation. I realize that graduate school will not be easy, but I believe that I am well prepared, both academically and experientially.

■ Examples of Weak Professional Statements

Letters and Sciences

Psychology

Psychology is a diverse field which deals with a diverse creature, the human being. What does it mean to be a human being? How does one be the best human being one can be? These are questions that psychology has been attempting to answer for decades. We, as a field, have gone through many transitions. "Answers" have been provided along the molecular lines from the Structuralists to the Psychosexual theory of Freud to the molar viewpoint of the Functionalists. The other more specific areas in the field of psychology have directed themselves towards the essence of being human. The Behaviorists claim that the essence is being like a machine responding to stimuli. The Humanists hold to the idea that the essence is inclusive of "spirit" as well as material. From this myriad of foundations much has been discounted and much has been accomplished. The progress made by these groups has now led us to a point where we are now ready for another transition.

We, as a field, need to allow ourselves to pull from all of these schools to find the most all-encompassing and flexible foundation to work from. This foundation will allow us to approach the diverseness of individuals in a permissive manner. Problems have arisen in the past due to preconceptions and generalizations. These have led us to trying to fit unique people and situations into a predetermined mold. The key to progress, especially in a counseling situation, is attempting to put these preconceptions and generalizations aside and allowing for the fact that, yes, each individual and situation is indeed unique. Each situation will demand different approaches that will allow the client to work out his or her problems in a way that is most productive for him or her.

Existential Phenomenology is the approach that works most directly towards the goal of allowing people to stay true to themselves. By this statement it may be concluded that Existential Phenomenology focuses on the putting aside of preconceptions and allowing the client to remain independent while working through problems. This approach is the ideal foundation on which to build any psychological practice. Having an Existential Phenomenological baseline as a counselor will provide the clients with a sense of security in themselves and will leave the counselor open to many more approaches to helping the client. The goal is to make the client more productive in his or her own particular life.

I have studied psychology for four years at Brockport. During this collegiate experience I was exposed to many aspects of psychology as well as life. I took many psychology classes which culminated in the end with an internship at Pathways, a halfway house for mental health and drug and alcohol clients. My experiences at Pathways gave me the chance to interact directly with clients, organize activities, participate in staff development in-services, and to begin to discover how the network of the mental health system works. My internship was beneficial in many ways especially in that it gave me insight and direction as to what applications of my major I want to pursue.

Through insights gained from my internship and my other work and life experiences, I have decided that my ultimate goal is to receive my Ph.D in Existential Psychology. This degree will allow me to have a private practice and to help people with their struggles in life. I have been exposed to many different situations and people through working in camps, lifeguarding, babysitting, volunteering at a nursing home, traveling to Europe and Australia, being involved in a variety of activities on campus, and by just life itself. With the education that your school can offer me I will be able to further develop myself to a point that I will be more prepared to help others.

Psychology

Psychology today is a very broad field which covers many disciplines. I am interested in all aspects of psychology, but my major interest lies in counseling and therapy of adjustment problems such as stress, drugs & alcohol, career and lifestyles. Although it is a rather new and growing discipline in the field of psychology, I believe it is an important one in the understanding of how the mind works in relation to the social and occupational functions, and how our lifestyles affect our personality and personal growth.

Adjustment problems are becoming a growing issue in today's society with an increase of drug and alcohol problems, single parent families, suicides, eating disorders and career burnout to just list a few factors in a long list of adjustment problems.

I believe with my education and background experience in this field I can help people to adjust and cope with these problems. I feel that my college education should be used for the benefit of helping human beings. It also gives me great personal satisfaction in helping people, and I feel I can help them the most with my experience and knowledge of psychology.

I plan to continue on in my studies and get my Master's. I would like to eventually pass my knowledge on by teaching at a college. I feel that teaching the younger population on the subject of adjustment will give them a better understanding of how their mind works in relation to their social and occupational function. With this knowledge they will be able to adjust and cope with problems further on in their life.

I am a very well rounded person, and my academics speak for themselves. I am determined to succeed in whatever I do. I am involved in many functions and activities. I am also aware of things going on around me and in our society. I understand and can relate to the needs and problems that face others. I believe that my weaknesses are my strengths. It is my weaknesses that help me understand and relate to how other people feel and react to problems.

Psychology is a never-ending learning and understanding process of how the mind works. It is this that drives me on to learn as much as I can. I hope to pass this knowledge on someday in my teachings and counseling.

Psychology

The area of social and behavioral sciences in which I am most interested is psychology. I am very attracted to studying human interaction. I want to know why people act as they do and for what reasons. There are numerous different reasons for the many happenings that occur every day. Psychology tries to explain these occurrences by doing research.

Before I explain the approaches of research, I would like to define psychology. It is the scientific study of behavior. It is complex and involves the study of behavior of both humans and animals. It is a science because psychologists use the same methods of research found in other areas of scientific investigation (Muchinsky, 1985). Some research is biological in nature, while other research is more socially based.

After my undergraduate work is complete, I plan to further my education because a minimum of a Master's Degree is necessary to qualify as an industrial psychologist. This is what I want to be. Although I have not yet paid much attention to earning a Doctorate, because presently I am more interested in a Master's, some day I am sure that this degree will be necessary due to increased specialization of the field.

I do not necessarily just want to help people. I want to get others to realize their strengths in order for them to contribute to society in whatever way or ways they can, as well as to get them to improve any weaknesses they may possess. I feel that I have the ability as well as the flexibility to get others to realize their potential as well as limitations. I have been or am a member of a number of organizations and am currently president of the psychology club here at school. Because of this organizational activity, I feel I can cooperatively work with others on completing a task. As far as weaknesses my ability to perform statistics and computer literacy are not yet sufficient for the professional world.

The purpose of Industrial Psychology is to use psychological principles and research methods to further our understanding of the important, human activity, work. One is concerned with developing theories or models that help organize and make sense of worker behavior. In applying these theories or models he or she hopes to solve work behavior problems, such as turnover or poor productivity.

The part of industrial psychology in which I am most interested is personnel psychology. It is composed of three ideas. One, people differ in significant psychological and behavioral characteristics such as technical and social skills. Jobs differ with respect to the psychological and behavioral demands that are made on the worker, like deadlines, is second. Finally, people and organizations are most satisfied and productive when people are placed in jobs that match their abilities and interest (Benner, 1985). In using psychological tests and measures to assess individual differences and job analyses, the procedures to assess the differences, I would assist an organization in selecting new employees, identify career paths for present employees, appraise worker performance, and do statistics.

I really hope to be an Industrial Psychologist when I finish school, and would like to be at least an associate of the American Psychological Association. In all honesty I feel the potential is here. Now the effort and chance must appear in the scene.

Professions

English Education

I am a second semester sophomore working toward my Bachelor's Degree in Secondary English Education. I want to be able to teach my students more than just English grammar and usage or the symbolism in *Moby Dick*. I want to teach them to be proud of who they are and what they stand for. I want them to know I am there for them to talk to when they have problems. I want to be able to make a difference in the lives of future generations.

I also plan on continuing to take classes even after I have earned my Bachelor's Degree. I want to be able to expand my knowledge and remember the students' perspective of the classroom as much as possible. I feel that it is very important that teachers continue to learn new things and keep up to date about older subjects.

Another important job for teachers today is to generate interest in their students toward a subject. Many teen-agers today are searching everywhere for something to interest them. I believe teachers should try harder to find a subject that can be taught in the classroom, and teach and interest the students at the same time. This may seem like a lot of extra work, but I believe it is part of a teacher's job. Teachers are entrusted with the lives and minds of our future generations.

Although these topics I've just sketched over are important, I believe the most important subject for teachers is to show their students they care. If we don't show our students we care, they won't care as much about their class-work and may think more about dropping out of school. I feel it is very important that we help these students. We have to show them we care and are willing to listen and try to help. Teenagers today face a lot more problems and chaos than they used to. We have to help them through the rough spots. They are the future generations of this country. We help ourselves by making them the best people they can be.

Nursing

In 1986, I graduated from high school as well as from the Elliot B.O.C.E.S. as a Licensed Practical Nurse. Since becoming a nurse I have learned what a tremendous responsibility it is to care for people who entrust their life into my hands. I have learned that peoples' emotional needs are as important as their physical needs. I feel a sense of personal satisfaction to help others. One needs a great deal of compassion and empathy in order to help others and I feel I have been blessed with these talents. It is a great reward to help people and I feel people benefit from my care. I have chosen nursing as a career because it is a wonderful, satisfying, rewarding experience. Throughout my nursing, I have learned to care for all of life and love, for nature in its endless change, for people everywhere. I have learned to care for myself as well as others, for health and radiant joy, for now and ever more I have learned to care. I enjoy my experience as an LPN and I want to further my education as a Registered Nurse so that I can expand my nursing knowledge. After I get my Bachelor's Degree in Nursing, I would eventually like to become a midwife so that families can experience the joy of home birth.

THE ESSAY EXAM: WRITING IN CLASS

The essay exam is a unique genre, with its own requirements and constraints. If it is to function as a test of students' knowledge, a way for them to pull together what they have learned and an effective exercise in critical thinking, students must learn to meet its demands.

Not all of us give essay exams--for good reasons. They are time consuming to administer and even more time consuming to evaluate. But even in disciplines where the emphasis is on calculations, performance, and/or laboratory experiments, a short essay indicates to students that not just performance but writing is also necessary, for example, to state, explain, interpret laws, and to synthesize what they know about their field.

Taking essay exams has personal benefits. Not only does it improve students' confidence about their writing ability, it also seems to improve other areas of self-reported growth and satisfaction with college. Essay exams also influence the way students study.[3]

Most important, writing on demand prepares students for that same necessary skill in the professional world. There are occasions for writing when we do not have the luxury of time. Like reporters, we must prepare materials, write accurately, intelligently, and fast. Examination essay writing--writing within a limited time period--gives students practice in writing under pressure, creating a first draft that communicates clearly, though it may not have the polish of revised and edited prose. Essay exam writers need to compose in a form that may even be cut short for lack of time.

Essay exams should oblige students to combine higher level cognitive categories. Like papers, essay tests reveal students' thought patterns. Unlike papers, they can more quickly reveal how students arrive at an answer to a question because such exams require them to supply an answer rather than merely select one, as in, for example, "Answer true, false, uncertain," with an explanation/ justification. Another type of short-answer essay can ask for extended definitions of terms. The first sentence defines the term (a matter of recall). The second sentence can explain the significance of the term in the context of the course.[4] In fact, answers that seem wrong in a multiple-choice exam might turn out to be correct based on students' reasoning on an essay exam.[5]

Of course, essay exams are generally designed to demonstrate students' mastery and understanding of content and their ability to connect ideas or approach the course material in new ways. Other exams may ask students to examine some ideas or principles closely. Still other essay exams may ask students to imagine particular situations or draw reasonable conclusions from a set of data. In business, for example, two kinds of essay questions are common: those that test students' understanding of concepts and theory, and those that test students' ability to apply those concepts to actual situations.[6]

Thus, essay exams should be a matter not of quantity but of quality. How can that quality be achieved? First, by knowing the course content; second, by using skills not directly related to course content. High grades should go not to the quickest writers but to the most effective writers: students who best organize and present what they know.

Essay tests vary in kind and length. Some have multiple parts; others ask only one question. Some may be open- or closed-book tests. Some questions are moderately open-ended, giving students some latitude over their response. Others may be timed or untimed, in-class or take-home, the latter being evaluated more rigorously than the timed, in-class test essay. Students usually memorize material, but memorizing is more essential in in-class, closed-book essay exams, timed or untimed.

As faculty, our work is to understand the specific skills and strategies our exams demand and to pass that information on to our students. But to do so (and to make our job of correcting the exams easier) we need to design exam questions carefully. Developing essay exam questions generally follows the same criteria as those for designing writing assignments (see Chapter 9). Most of us have been developing exams for years and are reluctant to change our philosophy or our logistics. The information below may thus seem obvious, simplistic, or redundant. However, we may wish to skim it for reminders and helpful hints.

To determine what to test for, we might want to chart

1. content categories to examine;
2. cognitive categories, the type of student thought we wish to evaluate (see, for example, Bloom's taxonomy in Chapter 5); and
3. the priorities of the above categories.

■ Checklist for Evaluating Essay Examination Questions

1. Is the question phrased clearly and specifically?
2. Does the question specify the discursive process required (e.g., trace, justify)?
3. What knowledge is the question intended to elicit?
4. What cognitive skills is the question intended to elicit?
5. What writing skills does the question require of students?
6. Does the course adequately prepare students to answer the question?
7. Are students given adequate time in which to answer the question?
8. Is the basis for evaluating students' responses specified?

9. In what ways is responding to this question a learning experience for students?
10. What relationship, if any, exists between the examination as a written assignment and the other written assignments in the course?
11. Are evaluation criteria, such as length and/or percentages or points that contribute to a passing or superior grade, specified? A short statement about standards at the bottom of the exam will do. Assigning a number of points to each essay question helps students allocate their time.

Example

Each essay is worth 10 points:
4 for demonstrating your understanding of key concepts;
3 for details and facts used to support general statements; and
3 for clarity and organization.

Tips for Faculty: Writing Essay Exam Questions

1. Avoid standardized essay tests over whose content we have little control; prefer individually or departmentally produced exams.
2. Avoid who, what, where lists of questions.
3. Several short-answer essay questions may be preferable to one or two extended essays because they cover more ground and are easier to grade.
4. Give exam questions to a colleague (preferably someone in a different discipline) and see if that person has difficulty understanding them. For example, ask a colleague to explain the question in his or her own words.
5. Write a response to our own question. In the process of writing the essay we discover problems with the question and see ways of correcting the question and/or our instructions.
6. Look for recurring difficulties in answers that might point to a problem with the question itself. We can then correct them for future exams.
7. Prepare students for essays by providing them with several questions in advance. Write five essay questions and circulate them. Tell them they should prepare for all five. But they will be asked three.
8. Rehearse. Give students sample questions and discuss answers.
9. A few days before the exam, ask students to write an essay that will help them on the exam. Model answers, students and our own, for the class.
10. Discourage rewriting. Instead, teach students to plan. If students start writing too quickly, don't give paper to them before they plan it out.
11. Teach students to attend carefully to the demands of the questions.
12. Encourage students to use information from other courses.
13. Make a dictionary available.

14. Students may want to drop names of several relevant sources. Determine whether this is done in order to prove how much reading they've done, how well they remember it, or how well they grasp it.
15. Avoid reading an essay like a multiple-choice test because after a while we end up looking only for the essential information.
16. Be on the lookout for inconsistent scoring, particularly when we are tired.
17. Since essay exams may not adequately sample course content, combine it with other evaluative measures.

■ Tips for Students

Note-Taking and Studying[7]

1. Find out early in the course what your instructors emphasize and their approach to essay tests. From the start, organize your class and reading notes with that approach in mind.
2. Get a sense of the flow of the field, the evolution of certain phenomena. In looking over your notes, try to see comparisons, contrasts, relationships between parts--the big picture--as well as the bits and pieces. Develop outlines and flow charts that trace key aspects of the subject.
3. Fix in memory key names, trends, dates.
4. Try to think of likely questions and outline answers to them. Instructors tend to test according to their notes rather than according to the texts. However, referring only to class notes looks like you only attended lectures but did not read the books.[8]
5. Form a study group.

Taking the Exam

1. Read **all** the questions carefully, scrutinizing key directive words. Resist the temptation to see only the highlights or to jump to conclusions. Make note of qualifiers (some, never, etc.) and be wary of absolute statements (All working adults pay taxes.).
   A. Common essay directions are to Discuss, Describe, or Analyze. The challenge in such questions lies in your ability to impose organization on a broad subject. First you must decide: How shall I limit X? How shall I divide X into sensible, manageable segments? Let us say the direction is "Discuss political elites." The very phrasing seems to entice us to blurt out everything and anything we happen to recall about elites and their societies. Resist the temptation. Take time to write an outline and limit your approach to an angle of the problem that will most favorably display your knowledge and understanding.

B. Sometimes you can better deal with a topic if you turn it into a question. Answers to them may give you suggestions for a thesis sentence and a plan. For example:

Direction:	The Reformation was caused by economic factors. Discuss.
Ask yourself:	Was the Reformation caused by economic factors? Which noneconomic factors should I elaborate on?
Direction:	Analyze the theme of social class in nineteenth-century novels.
Ask yourself:	What do the authors of nineteenth-century novels think about social class? What do the novels' characters think? What social classes are illustrated in the novels?

C. If you are instructed to compare and/or contrast, you are still confronted with the basic problem of selecting a focus, organizing your facts, and indicating to your instructor what your approach will be. Don't automatically give every fact you know about X and then every fact about Y. Instead, outline the major similarities and/or differences. Under each similarity or difference discuss both X and Y, making specific and concrete comparisons.

D. If you are asked to identify or define, follow two rules:
   (1) Put each item into a major category.
   (2) Separate it from all other items in its category by its distinguishing attributes.

E. If you are instructed to agree or disagree, it is important to remember that it is usually possible to write an A exam whether you agree or disagree; the instructor is interested in whether you can marshal evidence to support your position. Keep both sides in mind when preparing for the exam.[9]

2. Bring a watch and budget time for each question according to its worth. Note the times in the margins. Check the time occasionally. Conclude your essay and go on to the next question when the time you budgeted has passed. Leave some space to write more if you find time later to go back to a question that you couldn't finish. It is better to write something for every item than to omit a question because you devoted too much time to other parts of the test. If you run out of time, outline main points and examples, and write "out of time" to tell your instructor what happened.
3. Spend even more time mapping your time if you have more than one essay question or several parts to one question. If your instructor does not provide time limits or points toward a perfect grade, figure generally: 25% for planning, 60% for writing, 15% for proofing. Figure in time for rereading for mistakes.
4. Do the easiest question first--which is *not* necessarily the first question. Knowing at least one response should relax you for the rest of the exam.

5. A paper is satisfactory only if it directly answers the questions asked. Good answers to essay questions depend in part on a clear understanding of the meanings of the important directive words (see Important Word Meanings in Chapter 9). Circle or underline key action words. If you are to answer A *or* B, for example, underline the *or* and don't answer both.
6. Come right to the point. Don't waste time with a general introduction or rambling. Organize your essay around a clear and limited focus established quickly, and indicate the subordinate sections. This serves as a guide for you as well as for your instructor. For many essays the thesis sentence also frames a conclusion, not merely announces the sections. A point of view should also help you organize and select the facts you wish to include, for example:

   Essay Question: Discuss the concept of love in D.H. Lawrence's novel *Women in Love*.

   Thesis: An examination of bisexual, homosexual, and familial love in *Women in Love* reveals the hatred and the isolation that are present even in the closest relationships.

7. List on scratch paper relevant points to support your thesis, particularly if your instructor tells you won't have time to rewrite. Jot down specifics quickly before you forget. Then organize your specifics by number. Although your essay should be factual (not just opinions and generalizations), you will not have enough time to write all the details you know. Do not try to tell everything you know. You must choose. Essay tests measure your ability to select, organize, and analyze the details you have mastered. Choose those facts or data that best support your controlling idea. After you have written a plan, ask yourself, "Have I left out anything important for defending my thesis?"

■ Tips for Students: Writing Good Essay Exams

1. Stick to your subject. Your essay should give only what the question calls for and not introduce irrelevant information.
2. Follow the exact order or sequence of the question; for instance, if the question has several parts, the answer addresses part one first, part two second, and so on.
3. Distinguish clearly between your own views and those of authorities from whom you borrow.
4. Follow the proper rules of documentation and give credit to any sources you use, including the textbook. (Note: Writing in class under time constraints and without materials may make it difficult to meet this criterion fully.)

5. Start with a clear and direct opening sentence. Keep your controlling idea in mind as you incorporate your items in your answer. Occasionally, reread the question to make sure you are still on target.
6. Work from the general to the specific. Support general statements with particular and relevant evidence. Evidence is crucial. Your instructor is testing your detailed knowledge of a body of material not just your ability to make or repeat generalizations. Do not merely state what you believe; explain why you believe it.
7. Allow room for emendations. Double space in case you want to fit ideas in as they come during rereading. If organization is important, it is also easier to follow insertions.
8. Usually rewriting is a waste of time because the information is more important than style or neatness. Know if you need time to rewrite because your writing is unintelligible.
9. Proofread your essays at the end of the exam period. It's easy to misspell even simple words, to omit letters or words, or to transpose numbers when you are writing under pressure. Make corrections neatly.
10. While mechanics may not count, a neat answer makes a better impression. Your instructor will be more sympathetic to a clean paper.
11. If you change your mind on something, change your answer. On average you will pick up more points than you will lose.

Sample Essay Exam Prompts

Letters and Sciences

Anthropology of Sport: Mid-term Evaluation[10]

Answer two of the following in well documented essays. Include an opening statement. Confirm or challenge the proposition through examples, reference to class lectures, required reading, films, and so on.

1. Discuss the special features of the social science discipline, anthropology, that make it valuable for a unique analysis of sport.
2. Imagine you are the coach of a multi-ethnic soccer team in Rochester. Your team is composed of 6 African Americans, 4 Puerto Ricans, 2 native Americans, 2 Laotians, and 3 Whites. On the basis of what you know about the anthropology of sport, how could an anthropological approach assist you in being a more effective coach?
3. Based on the film *Trobriand Cricket*, analyze the various ways in which the game of Cricket played by the Trobriand islanders reflects the fundamental values and characteristics of that culture.
4. Clifford Geertz is one of the premiere theoreticians among contemporary anthropologists. Why is his study of the Balinese cockfight considered a classic? What are some of the functions of the cockfight in Balinese culture?

Anthropology: First Essay Exam for Human Survival[11]

You have read or heard about the extinction of the Tasmanians, the Selk'nam (Ona), and the Yahi and have learned about the circumstances of the last survivors of these distinct lifeways (Truganini and Ishi). Write an essay describing what your concerns might be if you were the last survivor of a tribal culture. What would you want others to know about you and your way of life? What lessons would you want them to carry away from a discussion with you?

Your essay will be judged on clarity, depth of analysis, and quality of thought and interest expressed in the product.

Anthropology: Take-Home Exam[12]

Culture is an integrated system. Changing one part ultimately brings about changes in the entire system. !Kung culture is rapidly changing due to ecological, political, and economic shifts. Most !Kung will have to give up hunting/gathering in favor of ranching, wage labor, small scale farming, or other non-traditional ways of life. Your task is to project how !Kung culture will respond to these changes. Answer parts 1, 2, and 3.

1. Life is rapidly changing for traditional societies around the world. Look ahead twenty years and project what you think will be the major factors bringing about change in Dobe !Kung culture and society. Explain the causes of these changes, why they are likely to be important and their specific effects. Be specific and justify your answers with relevant examples from Lee, Whitten and Hunter, and the lectures.
2. Then select two of the following aspects of traditional !Kung culture and elaborate on how and why they will be affected by these changes: kinship, sex roles, political structure, religion, reciprocity. Justify your conclusions with relevant examples.
3. Although traditional cultures inevitably change as the world changes, the traditional culture also provides a framework for adapting to change. That is, traditional culture can provide human resources with ways to work together, ways to solve problems, etc., that might prove useful during times of change. Identify and discuss the two elements of traditional !Kung culture that you believe will be most important in helping the !Kung cope with the changes identified above. Justify your conclusions with relevant examples.

History of Mathematics: Mid-Term Open Book Test[13]

Purpose: To evaluate students' awareness of the historical development of the number systems and arithmetic, geometry, calculus.

Answer five essay questions from the following topics:

1. Discuss the development of number systems from counting processes, including examples of typical bases and reasons for choosing such bases.
2. Outline the historical development of integers, rational numbers, irrational numbers, real numbers, and complex numbers.
3. Explain each of the following number systems by example: simple grouping systems, multiplicative grouping systems, ciphered numeral systems, and positioned numeral systems.
4. Present an argument on the abacist and the algorist (advantages and disadvantages).

5. Discuss Euclid's "Elements" by explaining what they are, how and when they emerged, and how they survived to date.
6. Describe Newton's contributions to calculus.
7. Describe Liebniz's contribution to calculus.

Philosophy[14]

Answer two of the following essay questions. You must answer the required question and one of the two other questions. You have two hours and should make good use of time to produce clearly written, well-organized, and well-developed essays.

1. *Required Question*
   Discuss Hume's views on causal reasoning and induction. Be sure to explain accurately and fully at least the following points: A) why causal relations are important for increasing our knowledge of matters of fact; B) why causal relations are not demonstrable (here it is appropriate to discuss, among other points, Hume's attack on the "Rationalist Conception of Causality"); C) why inductive inferences are not even rational (here you should present both Hume's analysis of reasoning about matters of fact and his critique of his reasoning; D) what the role of ***custom*** or ***habit*** is in drawing inductive inferences.
2. *Choose One of Two Questions*
   A. Discuss Hume's theory of impressions and ideas and its implications for ***substance*** and ***self***. You should be sure to 1) explain how Hume defines impressions and ideas, and how he thinks impressions are related to ideas; 2) explain the test for meaning that follows from Hume's theory; 3) explain how Hume applies this test to the terms ***substance*** and ***self***; and 4) explain the "bundle" views about the nature of a thing and of a mind or self that Hume is led to by applying his test. Then you should discuss as fully as you can the extent to which Hume's "bundle" views are tenable, especially in light of questions about a thing's identity through time and about the mind's awareness of succession in time. (Do not lump together your discussion of the bundle views of a ***thing*** and of a ***mind***, since these raise different issues.)
   B. Explain Hume's theory of causality, including his views about ***necessary connection*** or ***power*** and his definitions of causality. You should explain 1) what the idea of necessary connection or power has to do with the topic of causality; 2) how Hume approaches the topic of necessary connection or power; 3) what his negative views about necessary connection or power are and how he argues for them; and 4) what his positive view about necessary connection is and how he argues for it. Then you should present, explain, and compare Hume's two definitions of causality. What are some of the implications of these definitions? What are some objections to Hume's regularity view of causation, and how might a defender of Hume's view respond to these?

Professions

Health Science: Graduate Applicants[15]

Directions: Answer each question. Please use, apply, and demonstrate the knowledge you gained from your education and personal experience. Show the reader your reasoning, and provide supporting evidence for your point of view.

You have three hours to answer the questions, allotting approximately 45 minutes for each question.

1. Explain your understanding of the field of health education, and describe your commitment to the profession.
2. Health education programs exist in multiple settings including public health deparments, voluntary health associations, medical and medical care agencies and organizations, industrial settings, various advocacy groups, as well as public schools.
   A. In what capacity do you see yourself functioning as a health educator? Explain.
   B. What knowledge and skills would you like to develop as a result of completing the master's program at Brockport?
3. Refer to the table below to answer the following question:
   A. For most causes of death, lifestyle appears to play a much greater role than that of inadequate health care. Provide reasons why lifestyle has a significant influence not only on health status but on longevity.
   B. Select a cause of death (HIV, cancer, heart disease, diabetes, etc.) and describe strategies **other than providing information** that health educators can use to make an impact on this problem. Provide a rationale for your recommendations.

	Percentage	Population in Millions
Inadequate Health Care	11 %	†
Environment	19 %	††
Human Biology	27 %	†††
Lifestyle	43 %	††††

Recreation and Leisure Studies: Pilot Writing Exercise for a Master of Science Degree[16]

The Graduate Program requires the completion of a research study or scholarly investigation that culminates in either a formal master's thesis or a substantial written document.

Question 1
Describe a therapeutic recreation or recreation and leisure services management-related research problem to be solved that is of strong interest to you. Indicate why it is of interest, what is already known about the problem, and how you might scientifically go about seeking a solution.

Question 2
Read the attached article. Write your essay critiquing it. A critique exceeds summarizing the content of an article because it provides a critical analysis of the work. In organizing your essay, you may wish to address the following areas of analysis:

1. Identification of Major Theses of the Work

   Identify the major theses, topical areas, or ideas of the author. Summarize the author's conclusions, paying special attention to the relationship between the question noted and the answers provided. Indicate the source(s) on which the author bases his or her conclusions (e.g., pertinent literature, personal experience, own scientific investigation, etc.).

2. Critical Analysis of Major Theses of the Work

   Examine the reasoning or the logic underlying the content. What degrees of relationship exist between the evidence offered and the conclusions that the author has reached. That is, are key definitions clearly presented? Is a theoretical or conceptual base explicitly stated? Are the author's assumptions reasonable? Are his or her arguments adequate, flowing logically and compellingly by appealing to reason and not emotion?

3. Implications of the Article as a Whole

   Determine whether or not the author substantiated his or her major theses through logical reasoning. That is, are the conclusions drawn based on the arguments presented? Are the conclusions discussed in comparison to existing knowledge? Are practical implications drawn? Are future directions for inquiry offered?

PART 3

CHAPTER 9
DESIGNING WRITING ASSIGNMENTS

Garbage in. Garbage out.
Anon

A good essay prompt achieves its purpose of ranking, sorting, or placing students in ways that accurately reflect their mastery of particular material and their thinking/writing skills. While our students are often unable in themselves to generate competent written answers to a prompt or assignment, sometimes the difficulty lies with the assignment itself. Poorly conceived prompts not only result in unfinished, unfocused, or rambling essays but are also unfair.[1] In other words, the way we present a writing task often dictates the way students answer, for better or for worse. This chapter addresses that issue.

Lots of things can go wrong in written responses. Students may experience difficulty with[2]

- the subject or concept: degree of familiarity, abstractness of idea;
- the writing/cognitive process: explaining, generalizing from data, selecting relevant data, applying a principle to new data, forming a strategy, or composing answers;
- the question or stimulus: open or closed response, cues, tailoring available material to a predetermined length;
- the number of parts to the task and their interrelationships[3];
- ambiguity or misunderstanding of key words in the text; and
- the misleading effect of previous answers.

Of many dimensions to specify in generating writing assignments, two broad questions stand out[4]:

1. The nature of the discipline itself
    - A. What is the subject matter of the discipline? What are its boundaries? What is included? What is excluded?
    - B. How is the knowledge of the discipline structured? What are its axioms, paradigms, key concepts? What are the discovery processes? What thinking patterns predominate?
    - C. What are the sources of knowledge? What is considered acceptable evidence? How is information gathered? Evaluated or tested? Organized or stored? Processed?
    - D. What forms are used to convey knowledge? What degrees of information

processing are involved in the various forms? What sources do students need to be familiar with and able to use?

   E. What skills are needed to practice in the discipline as an academic field (e.g., finding data, creating and testing hypotheses) or a profession (e.g., applying knowledge to specific situations, communicating to other professionals and to those outside the field)?

2. The position of the particular course in the student's development
   A. What level of understanding, skill, or performance can be expected at the beginning and at the end of the course?
   B. How does the course build and feed into the program of study and into the total college curriculum?
   C. What skills must be developed through which disciplinary knowledge is communicated to those within and beyond its boundaries if students are to be prepared to function as professionals in the field?
   D. What familiarity with resources and forms may be assumed and what must be introduced?

RESEARCH BACKGROUND

The form and content of writing assignments has been the subject of research.

■ Topical Structures

In 1985 Smith, Hull, et al.,[5] investigated three topical structures:

1. an **open structure** in which students were given a broad topic, asked to draw on personal knowledge and experience, and to generalize from them;
2. a response **structure with one passage** which students were asked to read and respond to in some way; and
3. a response **structure with more than one passage** in which students were asked to describe what each author wrote about and generalize from them both.

The results indicated that:

1. The open-ended topic was found useful when high ability writers were to be distinguished from average- and lower-ability writers because superior writers were more able to marshal and order their evidence quickly.
2. If lower-ability writers were to be identified (the usual reason for placement tests), a response structure with multiple readings was recommended because it elicited the greatest length and the greatest number of errors.

3. For exit exams (e.g., essays used to determine who is proficient, who may move to a more advanced course, or who may be waived from further course work in writing), choosing a topic structure depended on whether one wished to err in the direction of pass or fail. Open topic structures, for example, might prevent marginal students from moving on to new courses, whereas the multiple passage response structure seemed to allow weaker writers to pass.
4. Both the open topical structure and the multiple reading structure generally yielded greatest length. However, students seemed to make most errors with them because the prompt made the highest cognitive demands, that is, the amount of evidence that students are obliged to synthesize.
5. Reading only one passage seemed least appropriate overall because it did not clearly distinguish students at various proficiency levels. Fewer errors were committed with the one passage provided because students borrowed text, in addition to which this structure tended to suppress fluency. However, the one-passage option should not be ignored. In some situations it was preferred because it produced the shortest essays that could be read and rated the fastest. The one-passage prompt afforded less chance that raters would be consciously or unconsciously affected by length, yet it sorted students.
6. Topics with low cognitive demands and high experiential (personal experience/opinion) demands elicited higher scores from readers.
7. High-cognitive and high-experiential topics produced no significant measurable change in proficiency.
8. The problem of unequal familiarity with a topic could usually be overcome by supplying ample information.
9. Small differences in wording within the same general framework seemed to make little difference in student responses.[6]

■ Assignment Specification

Another way to look at the effect of writing prompts on timed essays is by the amount of information they provide. Another study[7] examined the following categories:

Level 1: *Least Specification (*A Bare Prompt).

Example: Neo-Nazism in the Schools

Level 2: *Moderate Specification* (The Framed Prompt). A situation is presented and a task is presented based on the interpretation of the frame.

Example: According to recent reports there has been a marked increase in violent incidents in public schools. Why, in your view, does such violence occur?

Level 3: *Full Specification/Text Based* (Reading-Based Prompt).

Example: You are a member of a local school council made up of teachers and citizens. A recent increase in violent incidents in the schools has received widespread coverage in the local news media. As a teacher, you are aware of the problem, though you have not been personally involved in an incident. At its next meeting, the council elects to take some action. It asks each member to draft a statement setting forth his or her views on why such violence occurs. The statements will be published in the local newspaper. Write that statement expressing your views on the causes of violence in the schools.

Results

1. The essay topics themselves did not seem to affect the quality of student writing. The findings did not support the hypothesis that holistic scores are directly affected by the amount of rhetorical specification in a topic or by the personal or impersonal stance the topic invites the reader to take.
2. The information level of the topics had a discernible (if not a statistically significant) effect on student essays.
   - A. Essays written at a moderate information load had a higher mean score and a greater mean length than essays written at the least or fullest rhetorical specification.
   - B. Prompts that were at least moderately specified (rather than open) elicited more focused and better organized essays. This is more important in a timed essay than in an untimed one.[8]
3. Scores of low-ability students were not elevated by topics that provided full rhetorical specification. Low-ability student scores were also not higher on topics inviting students to write from personal experience. Raters gave higher scores to first-person papers, but on average, students writing on personal topics did not earn higher scores.
4. The length of student essays was significant. Longer essays received higher scores.

■ **Frame Topics** provide a structure that is open and is thus relatively content-fair.[9]

Models

- I had to decide about_____, so I relied on_____.
- Because I've learned to ________, I now can______.
- While conventional wisdom says________, the facts show______.
- They say____________, but my experience tells me_________.

Examples (bolded words are filled in)

1. A **contemporary political figure** that we studied who may **affect** the **U.S.** in **important ways**.

2. A **practice** in **American industry** that **affects the economy beneficially**.
3. A **common practice** in **American elections** that does **not** serve the **interests** of the **public**.
4. A **SUNY-wide policy** that does **not achieve** what it is **intended** to.[10]
5. You are asked to express a scientific problem, data, experiment, process, performance, production, script, or legislative case, **in terms of** concepts, theories, models, methodologies, issues, arguments, theorems, or constructs.[11]
6. Choose a ______ (writer, director, dancer, theorist) whom we have read in the course. Read additional material by that person as well as criticism of his or her work. Write an essay in which you place that writer's work in the development of **American** _________ (fiction, theatre, dance, philosophy, etc), making comparisons to other _________ (writers, directors, dancers, theorists/philosophers) to illustrate your main idea. Assume that your audience has read the material you refer to but may need to be reminded by brief references to those works. Do not retell that material but do use specific references to it to support your main point.[12]
7. What would you define as the single, most generally **useful/important** thing you know in _________ (chemistry, mathematics, nursing, etc.)? Indicate in your explanation where and how you learned it and why you chose it.

Writing Assignment Variables

Evaluating student writing has everything to do with the assignment that generated it. And this has everything to do with the dimensions of a writing assignment. Purves, et al.,[13] listed fifteen criteria which may be grouped into three major assignment variables: writer variables (interpretation of the topic, anxiety level, etc.), topic variables (vocabulary, syntax, subject), and procedural variables (instructions on the prompt itself).

A. Instruction
  1. Topic only
  2. Topic and content cues
B. Stimulus
  1. Unspecified
  2. Word, phrase, or sentence
  3. Test (non-literary)
  4. Test (literary)
  5. Photograph
  6. Music
  7. Other media
  8. Realia (field trip)
  9. Mixed
C. Cognitive Demand (what to do)
  0. Unspecified
  1. Reproduce facts
  2. Reproduce ideas
  3. Organize, reorganize events
  4. Organize, reorganize visual images, ideas, etc.
H. Rhetorical Specification/Mode
  0. Unspecified or multiple
  1. Note, informal letter
  2. Formal letter (e.g., business letter)
  3. Resume, summary, paraphrase
  4. Narrative
  5. Description
  6. Exposition, analysis, definition, classification
  7. Narrative, descriptive, exposition, with evaluative comment
  8. Argument, with evaluation and comment
  9. Literary genre
  10. Advertisement, media
  11. Journal writing
I. Tone, style
  0. Not specified
  1. Overall tone, style specified
  2. Particular stylistic devices specified
  3. Overall tone and style and stylistic devices specified
J. Advance preparation

  - 5. Invent, generate, evaluate
- D. Purpose
  - 0. Unspecified
  - 1. To learn
  - 2. To convey, signal
  - 3. To inform
  - 4. To convince, persuade
  - 5. To entertain
  - 6. Multiple
- E. Role
  - 0. Unspecified
  - 1. Write as self (journal, monologue, etc.)
  - 2. Write as self (autobiography)
  - 3. Write as self (detached observer)
  - 4. Write as other (assumed persona)
  - 5. Write as other (detached author)
- F. Audience
  - 0. Unspecified or teacher
  - 1. Self
  - 2. Specified individual (addressee of letter)
  - 3. Specified group
  - 4. Classmates
  - 5. General public
  - 6. Other
  - 7. With pre-writing activities
  - 8. Impromptu homework
  - 9. With pre-writing homework
- G. Content
  - 0. Unclassified, multiple
  - 1. Self
  - 2. Family, relatives, home
  - 3. Peers
  - 4. Specific individual (non-literary)
  - 5. School, schooling, education
  - 6. Leisure activities (sports, hobbies, etc.)
  - 7. Community
  - 8. School subject: mother tongue, literature
  - 9. School subject: other
  - 10. Social, political, cultural, economic issues: general
  - 11. Science, man and nature, ecology: general
  - 12. Psychology, philosophy, religion, ethics: general
  - 13. Other

  - 0. None, unspecified
  - 1. Class discussion
  - 2. Group discussion
  - 3. Collecting materials
  - 4. Previous work studied
- K. Length
  - 0. Unspecified
  - 1. One paragraph (<150 words)
  - 2. 2-5 paragraphs (<2 pages)
  - 3. 2-5 sides (300-700 words)
  - 4. >5 sides
- L. Format
  - 0. Unspecified
  - 1. Specified as to use of space on page
  - 2. Specified as to conventions
  - 3. Other specifications
- M. Time
  - 0. Unspecified
  - 1. Impromptu (<30 minutes)
  - 2. Impromptu (30-59 minutes)
  - 3. Impromptu (60-120 minutes)
  - 4. Impromptu (>120 minutes)
  - 5. With pre-writing activities (<60 minutes)
  - 6. With pre-writing activities (60-120 minutes)
- N. Numbers of Drafts
  - 0. Unspecified
  - 1. One draft only
  - 2. One draft with corrections
  - 3. Rough draft and revision with second copy
  - 4. Rough draft and revision to final edited copy
- O. Criteria for Evaluation
  - 0. Unspecified
  - 1. Grammar and orthography primarily
  - 2. Style and appropriateness primarily
  - 3. Organization and presentation primarily
  - 4. Ideas and content primarily
  - 5. Neatness primarily
  - 6. Combinations of above
  - 7. Other criteria

But obviously not every assignment needs to specify all the criteria listed above. Moreover, it is difficult--if not impossible--and risky to do so. For example, one procedure for making composition research valid and reliable is to control for aim and mode. For basic writers, however, specifying aim and mode may increase the amount of information that must be processed and thus may result in writing that is more inept than usual. In actual fact, basic-writing students understand perfectly well without that information the classic student-teacher rhetorical situation in which they must show competence.[14]

Characteristics of Good Writing Prompts

- **Clarity**. Students will not waste time trying to figure out what is called for but will be able to get right down to work.
- **Validity**. Good students will receive high scores and weak students will receive low scores, and there is not too large a concentration at the middle.
- **Reliability**. Scoring of papers shows considerable agreement among readers.
- **Interest**. The question offers sufficient intrinsic interest, so students will write with some genuine concern, and readers will not get bored.[15]

HEURISTICS FOR DESIGNING WRITING ASSIGNMENTS

There are many models to guide the writing of successful assignments. I provide several below:

RAFTT[16]

Students receiving assignments written in **RAFTT** format receive clear and concise directions and feel more comfortable with them. If we ask students to shift audience, format, or other features of the writing throughout the semester, **RAFTT** helps students make the shift.

Role:	the position, stance, point-of-view that writers take on: Critic, Supervisor, Researcher, Teacher, Student, Technician, Expert, Participant-Observer
Audience:	persons for whom the written piece is intended, to whom writers are writing: peers, experts, neophytes, the lay public, the instructor
Format:	the form or genre into which the writing is placed: essay, article, editorial, proposal, recommendation, report, etc.
Tense:	the time element that controls the writing (past, present, future)
Topic:	the idea, concept, or content about which the writer writes

Questions to Ask When Designing Prompts[17]

1. **What do we want students to do?** The task: Is the task worth doing? Why? What will the assignment tell us about what they've learned? How does it fit our objectives at this point in the course? Does the assignment assess what students can do or what they know? Are we relating their work to the real world (including academic settings) or only to our classes or

the text? Does the assignment require specialized knowledge? Does it appeal to the interests and experiences of our students?

2. **How do we want them to do the assignment?** The process: Have we explained the steps students are to take in completing the assignment? Are students working alone or together? In what ways will they practice prewriting, writing, and rewriting? Have we given students enough information to make effective choices about subject, purpose, and form?
3. **For whom are students writing?** The audience: Who are the readers to whom the students are asked to address their ideas? Do students have enough information to assume a particular role with respect to readers?
4. **When will students do the assignment?** How does the assignment relate to what comes before and after it in the course? Is the assignment sequenced to give enough time for prewriting, writing, and rewriting? How much time in and outside of class will students need for each phase? To what extent will we guide students' work? What deadlines do we want to set for collecting students' papers (or various stages of the project)?
5. **Who will do what with this piece of information? What will we do with the assignment?** Evaluative Criteria: What are the standards by which we will evaluate the work? What constitutes a successful response to the assignment? What problems did we encounter when we tried to answer it? Grade it? How can the assignment be improved?

■ Criteria When Assigning Writing

1. Goal of assignment
2. Focus
3. Topic options
4. Terms used
5. Relevant class preparation
6. Role of instructor: Implicit? Explicit?
7. Intermediate audience who will see drafts
8. Time allotted
9. Length of sample
10. Audience and purpose
11. Location for writing
12. Expectations (needs help outside course; needs work within course; needs no help)
13. Stylistic features that evaluators will look for: title, documentation, stance (voice), outline, abstract, subheads
14. Special features: genre, skills, tasks, or information mandated
15. Relationship of format and style of assignment to the goals of the assignment
16. Disciplinary conventions of English (passive constructions, use of I, contractions)
17. Product specifications: due dates, number of drafts, page length, format, grading procedure, weight of product toward course grade

Questions about Professional Writing

1. **Nomenclature**. What do professionals in the field call this type of writing? What are the parts of this type of writing called?
2. **Purpose**. What are pre-professionals' most important goals? Do we want students to learn particular procedures, particular concepts, or both?
3. **Audience**. Who are the readers? Are they fellow experts? Are they apprentices? How much can writers assume that they know about the subject? Are they general readers? How much more information do writers have to make explicit for an audience of non-experts? Which audience is appropriate for the academic level of the assignment? What role do we play as we evaluate the papers?
4. **Style**. What do readers/evaluators expect in terms of format, documentation, stance, and style? What is the average length of an adequate response? What conventions about titles are observed? Are outlines, subheadings, charts, graphs, or illustrations appropriate? Is the use of *I*, contractions, fragments, passive constructions permissible? What style sheet do these professionals follow?
5. **Context**. What are the reasons for the features above? How do the nature of the discipline and the behavior of those within it influence choices of format, style, and documentation?

Prompt Design Questions[18]

Effective writing assignments should be contextualized and authentic (that is, linked to actual professional activities); be based on accessible content; be engaging and be developed along with evaluation criteria.

Features of Prompts

1. **Context**. What is the place of the prompt in the course, curriculum, program?
2. **Content**. What is its place within student writers' experiences?
3. **Language**. Are the instructions as brief as clarity allows, unambiguous, as complex as appropriate for writers; Is the prompt culturally accessible, easy to interpret?
4. **Tasks.** Is the prompt appropriately focused? Appropriately rich to allow proficient students to demonstrate their true range?
5. **Rhetorical**. What are the rhetorical cues or specifications?
6. **Evaluation**. What are the most critical criteria for judging performance?

Some Questions to Ask When Judging Writing Assignments[19]

1. What is the purpose of this assignment? Does the assignment reflect one or more of the goals of the course?

2. Is the assignment appropriate for students at this level?
3. At what point in the course does it take place? (In other words, what can be assumed about students' knowledge base or context for writing?)
4. Has the assignment been clearly and succinctly stated? Do the students know what they are expected to do? Do students know what we mean when we use particular words?
5. What terms will accurately and efficiently invoke the intellectual processes (justify, interpret, analyze) needed for the writing task? What verbal or conceptual abilities does the assignment ask students to use or develop?
6. What familiarity, if any, do students have with the genre of writing expected? (Are models of student or professional writing available?)
7. Does the assignment guide students in selecting materials, identifying pertinent questions and issues, and choosing perspectives on a subject? If students are not guided, is there a reason why?
8. Is there opportunity for questions?
9. What formatting, length, and time requirements are necessary? If the assignment is for in-class writing, can most of the students complete it in the time allotted?
10. Are students invited to define their role and audience?
11. Is there provision for peer, faculty, or writing center review of draft work?
12. How will the papers be evaluated? What are the appropriate criteria for evaluation?

Optional

1. Will students have a chance to read and rank order anonymous student papers in order to learn the implicit moves successful writers make on a particular writing task?
2. Will students have a chance to offer suggestions for the assignment's revision?
3. In what way does the assignment relate to preceding and ensuing course assignments?

■ Questions that Check for Complete Assignments[20]

Writer Why would writers complete this assignment? (Goal)
(Earn a grade? Share? Discover? Inform?)

What roles might they assume? Not assume?
(Expert? Novice? Proponent? Opponent?)

Reader Who will read the assignment?
(Teacher? Classmates? Self? Others?)

	Why? (Accredit? Assist? Diagnose? Enjoy?) What roles will reader(s) take? Not take? (Examiner? Critic? Colleague? Friend?)
Relationship	What relationships may writers establish with readers? Not establish? (Superiors/Subordinates? Peers?)
World	What should writers discuss or suggest they know about? What should they not discuss?
Message	How should writers portray that world? (What assertions might they make about that world?) What should they say? Not say?
Words	What formats might writers use? Not use? (Memo? Script? Essay? Report? Proposal?) What conventions (grammar, mechanics, usage, vocabulary, punctuation, spelling, etc.) apply?

Assignments Phrased as One-Sentence Communication Situations

Writers	Relate	To readers	Messages by portraying the world	In words
To earn a grade, a science student	proves	to a teacher-examiner	that she or he successfully completed an experiment	in a lab report.
To obtain clarification, a learner	outlines	for a teacher-as-senior professional	confusion over a reading assignment	in a journal entry.
To improve group work, a task force member	identifies	for other group members	activities that wasted everyone's time	in a 3-sentence session evaluation.
To generate ideas for a paper, a writer	free-associates	for him- or herself	everything the topic brings to mind	in a list.

Guides for Instructor-Generated Writing Assignments [21]

1. Name of course
2. What is the objective in the course that the assignment will help your students fulfill? Purpose of the assignment?
3. Specific audience for the assignment

4. Intermediate audience who will see drafts
5. Special skills, tasks, or information demanded by the assignment
6. Class preparation for the assignment
7. Requirements specific to the assignment (due date, drafts, length, etc.)
8. Criteria for evaluating the assignment
9. Write out the assignment exactly as you would give it to your students, for example:

Dimensions of Writing Tasks[22]

Writing activity	Class	Source of knowledge	Completed in/out of class	Evaluation	Function
Book review	Academic	Text	Out	Written comments & grade	Reformulate & extend knowledge
Reading journal	General	Self & text	In & out	Comments	Extend knowledge
Point of view essay	Both above	Teacher, text	In	Grade	Apply information
Essay test	Both above	Teacher, text	In	Grade	Evaluate previous learning
Summary writing	General	Text	In	Grade	Reinforce previous learning
Worksheet	Both above	Text	In	Grade	Reinforce previous learning
Note taking	Both above	Teacher, text	In	None	Acquire knowledge
Research paper	Academic	Text	Out	Written comments & grade	Reformulate & extend knowledge

■ Student Assignment Guide[23]

Name
Course
Credit Value

Date
Assignment Number

1. The purpose of the assignment (get a grade, give information, gain approval, persuade the reader)

2. The audience for the assignment (teacher, friend, supervisor, customer)
   How much the audience knows about the topic (knows a little, a lot, is an authority)
3. Special skills and information demanded
4. Requirements of the assignment (due date, drafts, length)
5. The role I play in this assignment (myself, expert, judge, bystander)
6. My feelings about the topic (confident, neutral, angry)
7. The tone of language I should use (formal, casual, respectful, friendly, matter of fact, convincing)

Tips for Faculty[24]: Preparing Students for Writing Assignments

1. During the first week of classes we can provide students with information as to how papers will be graded and to what extent the final course grade reflects their writing. We should advise students that good writing will be rewarded and poor writing penalized.
2. Early in the semester we may give students a checklist to reinforce what we consider important in completing assignments successfully. We should require a handbook, a disciplinary style manual, or another guide to writing in our field.
3. We might prepare a context for writing assignments: reading, discussion, guided analysis.
4. We should put assignments in writing and take time to clarify them.
5. We might find out in advance what students know and don't know about the kind of writing we are asking for.
6. It helps to give a short writing assignment early in the semester for diagnostic purposes and for familiarizing students with our expectations.
7. Writing is generally used to test student's knowledge of a subject. For a change, we might develop assignments that help students learn more about a subject.
8. We might break up a large assignment into smaller steps, especially if our students have had little experience with complex writing (see Chapter 10 Sequencing Writing Assignments).
9. If possible, we should specify the audience for each assignment. This should help students make decisions about ideas, organization, and language. Occasionally, we should direct students to audiences other than us. We might try alternative but realistic readers.
   "Students' perception of audience--real, imagined, or contrived--has an effect on their ability to address readers. Either a specific topic with a believable audience or a very general topic without audience specification, provides the more experienced students who paid attention to rhetorical cues with a less confusing task."[25]
10. It helps to find colleagues teaching sections of the same course who might be willing to share writing prompts. Or we might run major assignments by them.
11. It is a good idea to keep notes on the success and pitfalls of each assignment that we generate. It helps us adjust the assignment for the next time.
12. Occasionally we should do an assignment ourselves. Have students watch us at the board or computer. We may be better able to advise students on it and may discover changes we need to make.

13. We should keep instructions as brief as clarity allows. We face a risk of overstructuring responses by overstructuring questions to cue writers. In other words, avoid overprompting, as in asking too many questions. To avoid the literal-minded, quiz-like responses, we should plant cues in topics to guide writers in generating content and in adopting appropriate forms. We should word questions by arranging them logically to suggest natural patterns of development, with ordered progressions of ideas, not random lists of the components of content. We are particularly cautioned against using lengthy, elaborated fictional or scenario-like topics. Opportunities for confusion, misinterpretation, and creative misreadings are proportionately increased. The more language and information students are given the more difficult it may be for them to get beyond the language of the topic to discover what they themselves have to say so that faculty ends up receiving their own prose back in "copy speech."
14. We need to balance the prompt between generalizations and specifics. Select subjects that invite reasonable generalizations but that are not so general as to prompt huge, overarching answers: for example, what are some aspects of American society that encourage rape? Or, discuss developments in the English novel in the Victorian period. By the same token, avoid undercueing with abstract directives, such as *discuss, comment on, tell.*
15. We should avoid the objective question masquerading as an essay question, for example: What are the five components of . . .? Or the closed question form that constrains response by inviting "yes" or "no" answers.
16. It is a good idea to balance constraints and choice. We can build some choices into the assignment, but too many distract and waste time. Cues for content should suggest options, not impose constraints. Elaborate cuing may help students to think of things to write about but can also lead to poor writing.[26] In mathematics, the sciences, or engineering, for example, questions should strike a balance between words and symbols.
17. We should avoid prompts that encourage obvious or stereotyped thinking. (The apple pie and motherhood issues like war is bad.)
18. It is wise to avoid teaching to an essay prompt. It may help students pass, but it dramatically undercuts the learning and writing processes.
19. It is important to free the assignment of hidden biases. We should avoid the "too private" question or special audiences that may trap writers into unwittingly violating the testing frame of reference or their cultural loyalties.
20. We should avoid specifying number of words, sentences, paragraphs. Rather, specify a range of pages (e.g., 8-10 pages).
21. It is good to save strong and weak papers to discuss or distribute as models.

WORDS THAT PROMPT COGNITIVE PROCESSES

■ Thinking Levels and Directive Words

To reduce the risk of students interpreting writing assignments in dramatically different ways, often in conflict with our expectations, we need to ask what our expectations are, what students think we are looking for. Furthermore, if we use words like *comment, discuss, tell, write about*, we cannot expect much more than rambling responses.[27] Writing assignments depend primarily on what major cognitive activity are we asking students to perform--to recall, analyze, synthesize, judge, practice, create, reflect, extend, master, discover. Below is a list of directive words keyed to thinking levels:

Thinking Level	**Directive Words**	
Knowledge: to recall Remembering previously learned material	Observe Repeat Label/Name Cluster List Record	Memorize Recall Recount Sort Outline (format stated) Define
Comprehension: to translate Grasping the meaning of the material	Recognize Locate Identify Restate Paraphrase Tell Describe Abstract	Report Express Explain Review Cite Document Support Summarize
Application: to generalize Using learned material in new and concrete situations	Select Use Manipulate Sequence Organize Show Frame	Dramatize Illustrate Test out Imagine Imitate Demonstrate Apply
Analysis: to breakdown Breaking material down into its component parts so that it may be more easily understood	Examine Classify Distinguish Compare Outline (no format given) Map Relate to Refute Analyze	Characterize Question Differentiate Contrast Research Interpret Defend Debate Conclude
Synthesis: to compose Bringing parts together into a coherent whole	Propose Plan Compose Speculate Create Design	Construct Emulate Imagine Formulate Invent

Evaluation: to assess Judging the value of material for a given purpose	Compare (pros/cons) Set priorities Rank Judge Decide Rate Evaluate	Justify Argue Convince Persuade Assess Value Predict Critique

■ Important Word Meanings

Good answers to essay questions depend in part on a clear understanding of the meanings of directive words. These words indicate the way in which the material should be presented. Mere evidence of knowledge is not enough. If you ask students to *compare* the British and American economies, they should get little or no credit if they simply *describe* them. If they are asked to *critique* the present electoral system, they are not answering the question if they merely *explain* how it operates. A paper is good only if it directly answers the question that was asked.

The words that follow are frequently used in writing assignment tasks:

acknowledge	Express feelings toward something or someone: apologies, condolences, congratulations, greetings, thanks. *Acknowledge your debt to your colleagues for their feedback on your report.*
affect	Influence; bring about a change in. *How did France's aid to the American colonists affect the outcome of the Revolutionary War?*
analyze	Break down or divide into component parts and show the relation of each part to the other parts and to the whole. *Analyze AIDS, emphasizing its early symptoms.*
cause	Something that produces an effect; a reason. *Explain two major causes of the War of 1812.*
characteristic	A distinguishing feature. *Explain an important characteristic of the supply-side economics.*
classify	Organize according to groups, categories. *Classify the major personality theories of the 20th century.*
compare	Bring out points of similarity and points of difference; show how things are alike and different. *Compare the legislative branches of the state governments with those of the national government.*

content	Subject matter; meaning or significance of a work or phenomenon; something contained in a *receptacle. What are some typical contents of leaking containers of hazardous wastes? How does Jefferson arrange the content of the Declaration of Independence?*
contrast	Bring out only differences, distinguish. *Contrast the novels of Jane Austen and William Makepeace Thackeray.*
critique	State your opinion of the correctness or merits of an item or issue; criticism may approve or disapprove. *Critique the increasing use of the executive agreement in international negotiations.*
define	Give the meaning of a phenomenon; place it in the class to which it belongs; then set it off from other items in the same class. How is it different from other members of that type? *Define Marx's concept of alienated labor.*
describe	Give an account of; tell about; give a word picture of. *Describe the pyramids of Egypt.*
discuss	Talk over; consider from various points of view; tell what the subject is about; concentrate on only the most important features. *Discuss the use of pesticides in controlling mosquitoes.*
effect	Result; impression; the way something acts on something. *What effects do the grading policies at your school have on learners?*
enumerate	Name one after another; list in concise form. *Enumerate the great Dutch painters of the seventeenth century.*
evaluate	Give the good points and the bad ones; appraise; provide an opinion regarding the merits of; talk over the advantages and limitations of. *Evaluate the contributions of computer-assisted instruction.*
explain	Make clear; interpret; make plain; tell "how" to do; tell the meaning of; tell the main reasons something happened. *Explain why ocean tides are not the same height every night.*
factor	Something that contributes to a result, process, or accomplishment. *What factors contribute to the high productivity of the salt marshes in Duval county?*
form	Shape and structure of something as distinguished from its content or

	substance. *Explain the statement: The basic embryonic form in all animals consists of five tubes.*
identify	Establish the origin, nature, or distinctive characteristics of. *Identify the characters from Shakespeare: Ophelia, Goneril, Desdemona, and Titania.*
illustrate	Use a word picture, diagram, chart, or concrete examples to clarify a point. *Illustrate the use of catapults in the amphibious warfare of Alexander.*
instruct	State specific directions about how a task is performed. *Instruct your peers on how to configure their bibliographic software.*
interpret	Make plain; give the meaning of; give your thinking about; explain meaning according to your sense of things; translate. *Interpret the poetic line, "The sound of a cobweb snapping is the noise of my life."*
justify	Provide reasons for; give your evidence; present facts to support your position. *Justify the American entry into World War II.*
orient	Acquaint an audience with information about a topic before the topic is discussed in depth. *Orient your readers to ecosystem principles.*
persuade	Argue using evidence to convince someone else of your point of view. *Persuade opponents that Rochester needs a metropolitan government, not a county city plan.*
plan	Account for an activity to be undertaken. *Plan the agenda for a marketing meeting.*
present	Describe, illustrate, and/or explain as if the audience is unfamiliar with that concept. *Present the case against campaign funding.*
prove	Establish the truth of something by giving factual evidence or logical reasons; demonstrate. *Prove that in a full employment economy, a society can get more of one product only by giving up another.*
record/report	Account for an event/act as it was experienced; account for something learned. *Record the activities of the crested crane.*
relate	Show how a topic has an effect on something else; the link or connection between two things. *Show the relationship between the horse and changes in the natural environment.*

review	Remind readers of some subject that has been previously presented. *Review the key elements of the Harlem Renaissance.*
signify	Make known; show. *How did the Vichy government signify their tolerance of the Nazi regime?*
summarize	Give the main points briefly; reduce the information on the subject without changing it. *Summarize the ways in which humans preserve food.*
trace	Follow the course of; follow the trail of; give a description of progress; provide important steps in the development of a phenomenon. *Trace the circulation of blood.*

Taxonomy of Speech Acts[28]

Constatives are expressions of belief together with expressions of an intention in which the audience forms or holds a like belief. In the particular description below, belief and intention are tacit in the expression.

- You *ascribe* if you express that a feature applies to someone or something.
- You *assent* if you express belief in a proposition already under discussion.
- You *assert* if you express a proposition.
- You *concede* if you express a proposition contrary to what you would like to or previously did believe.
- You *confirm* if you express a proposition along with support for it.
- You *describe* if you express that someone or something consists of certain features.
- You *dispute* if you express reason(s) not to believe a proposition already under discussion.
- You *dissent* if you express disbelief in a proposition already under discussion.
- You *inform* if you express a proposition that your audience does not yet believe.
- You *predict* if you express a proposition about the future.
- You *recount* if you express a proposition about the past.
- You *respond* if you express a proposition that has been inquired about.
- You *retract* if you express that you no longer believe a proposition.
- You *suggest* if you express some, but insufficient, reason(s) to believe a proposition.
- You *suppose* if you express that it is worth considering the consequences of a proposition.

Directives are expressions of an attitude toward some prospective action by the audience together with an intention that the attitude be taken as a reason to act.

- You *ask* if you express that you wish to know whether or not a proposition is true.
- You *command* if you express that your authority is reason for your audience to act.
- You *forbid* if you express that your authority is reason for your audience to refrain from acting.
- You *permit* if you express that your audience's action is possible by virtue of your authority.
- You *recommend* if you express the belief that there is good reason for your audience to act.
- You *request* if you express that you wish your audience to act.

Commissives are expressions of intentions to act together with expressions of belief that such expressions obligate you to act.

- You *offer* if you express that you intend to act if and when your audience wishes it.
- You *promise* if you express that you intend to act.

Acknowledgments are expressions of feelings toward an audience: apologies, condolences, congratulations, greetings, thanks.

SAMPLE WRITING PROMPTS

Association of American Medical Colleges: MCAT

The MCAT writing sample consists of two, 30-minute essays designed to assess skills in:

1. developing a central idea,
2. synthesizing concepts and ideas,
3. presenting ideas cohesively and logically, and
4. writing clearly, following accepted practices of grammar, syntax, and punctuation consistent with a timed, first-draft composition.

Content of Writing Sample Items

Each writing sample item provides a specific topic and requires an expository response. Writing sample topics are selected from areas of general interest such as business, politics, history, art, education, or ethics. Topics do not pertain to the content of biology, chemistry, or physics; to the medical school application process or reasons for the choice of medicine as a career; to social and cultural issues not in the general experience of college students; or to religious or other emotionally charged issues. Specific prior knowledge about the topic is not necessary to complete the writing sample.

Bare Prompt: MCAT Writing Test

Each MCAT writing sample item consists of a statement that expresses an opinion, discusses a philosophy, or describes a policy. The statement is followed by three writing tasks.

The first is to explain or interpret the statement. Because the statement is not intended to be plainly factual or self-evident, it usually cannot be explained in a single sentence (see Appendix Part 2 on explanation). In addressing this task, examinees should explain the meaning of the statement as thoroughly as possible.

> *Topic 1: An understanding of the past is necessary for solving the problems of the present.*
>
> *Write a unified essay in which you perform the following tasks. Explain what you think the above statement means. Describe a specific situation in which solving a current problem might not require an understanding of the past. Discuss what you think determines whether or not the past should be considered in solving the problems of the present.*

The second task requires consideration of a circumstance in which the statement might be contradicted or judged not applicable. Examinees must present a specific example that illustrates a viewpoint opposite to the one presented in the statement and should further explore the statement's meaning.

> *Topic 2: Politicians too often base their decisions on what will please the voters, not on what is best for the country.*
>
> *Write a unified essay in which you perform the following tasks. Explain what you think the above statement means. Describe a specific situation in which a politician might make an unpopular decision for the good of the country. Discuss the principles you think should determine whether political decisions should be made to please the voters or to serve the nation.*

The third task requires a discussion of ways in which the conflict between the initial statement and its opposition (expressed in the second writing task) might be resolved. Here, examinees must reconcile the two viewpoints. In responding to this task, examinees should apply their understanding of the topic to more general problems of principle, choice, judgment, or evaluation raised by the conflict between the opposing viewpoints.

> *Topic 3: No matter how oppressive a government, violent revolution is never justified.*
>
> *Write a unified essay in which you perform the following tasks. Explain what you think the above statement means. Describe a specific situation in which violent revolution might be justified. Discuss what you think determines whether or not violent revolution is justified.*

Reading-Based Prompt: GMAT Analysis of an Argument[29]

Time: 30 minutes

Directions: In this section you will be asked to write a critique of the argument presented below. *You are NOT being asked to present your own views on the subject.*

Read the argument and the instructions that follow it and then make any notes in your test booklet that will help you plan your response.

The following appeared as part of a recommendation by one of the directors of the Beta Company:

> *The Alpha Company has just reduced its workforce by laying off fifteen percent of its employees in all divisions and at all levels, and it is encouraging early retirement for other employees. As you know, the Beta Company manufactures some products similar to Alpha's, but our products have fallen over the last few years. To improve Beta's competitive position, we should try to hire a significant number of Alpha's*

> *former workers, since these experienced workers can provide valuable information about Alpha's successful methods, will require little training, and will be particularly motivated to compete against Alpha.*

Discuss how well reasoned you find this argument. In your discussion be sure to analyze the line of reasoning and the use of evidence in the argument. For example, you may need to consider what questionable assumptions underlie this thinking and what alternative explanations or counterexamples might weaken the conclusion. You can also discuss what sort of evidence would strengthen or refute the argument, what changes in the argument would make it more logically sound, and what, if anything, would help you better evaluate its conclusion.

Bare Prompt: GMAT Analysis of an Issue

Time: 30 minutes

Directions: In this section you will need to analyze the issue presented below and explain your views on it. The question has no "correct" answer. Instead, you should consider various perspectives as you develop your own position on the issue.

Read the statement and the instructions that follow it, and then make any notes in your test booklet that will help you plan your response. Begin writing your response on the separate answer sheet. Make sure that you use the answer sheet that goes with the writing task.

> *Employees should keep their private lives and personal activities as separate as possible from the workplace.*

Discuss the extent to which you agree or disagree with the opinion stated above. Support your views with reasons and/or examples from your own experience, observations, or reading.

Bare Prompt: GMAT Analysis of an Issue

Time: 30 minutes

Directions: In this section you will need to analyze the issue presented below and explain your views on it. The question has no "correct" answer. Instead, you should consider various perspectives as you develop your own position on the issue.

Read the statement and the instructions that follow it and then make any notes in your test booklet that will help you plan your response. Begin writing your response on the separate answer sheet. Make sure that you use the answer sheet that goes with the writing task.

> *The rise of multinational corporations is leading to global homogeneity.* People everywhere are beginning to want the same products and services, and regional differences are rapidly disappearing.*
>
> *homogeneity: sameness, similarity

Discuss the extent to which you agree or disagree with the opinion stated above. Support your views with reasons and/or examples from your own experience, observations, or reading.

Bare Prompt: SAT-II Writing Test

Part A
Time: 20 minutes

You have twenty minutes to plan and write an essay on the topic assigned below. DO NOT WRITE ON ANOTHER TOPIC. AN ESSAY ON ANOTHER TOPIC IS NOT ACCEPTABLE.

The essay is assigned to give you an opportunity to show how well you can write. You should, therefore, take care to express your thoughts on the topic clearly and effectively. How well you write is much more important than how much you write, but to cover the topic adequately, you will probably need to write more than one paragraph. Be specific.

Your essay must be written on the lines provided on your answer sheet. You will receive no other paper on which to write. You will find that you have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size. It is important to remember that what you write will be read by someone who is not familiar with your handwriting. Try to write or print so that what you are writing is legible to the reader.

Consider carefully the following statement and the assignment below it. Then plan and write your essay as directed.

> *A person's strength is often that person's weakness.*

Assignment: In an essay, discuss the statement above. Support your view with an example or examples from history, literature, science, the arts, current events, or your own experience or observation.

Bare Prompt: University of Michigan English Composition Board[30]

PART A

Time: 20 minutes

Directions: You will have 20 minutes to plan and write an essay on the topic below. You are expected to express your thoughts carefully, naturally, and effectively. Be specific. Remember that how well you write is much more important than how much you write. DO NOT WRITE ON A TOPIC OTHER THAN THE ONE ASSIGNED BELOW. AN ESSAY ON A TOPIC OF YOUR OWN CHOICE WILL RECEIVE NO CREDIT.

You must fit your essay on the answer sheet provided. You will receive no other paper on which to write. You will find that you have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size. First, consider carefully the following quotation. Then, read and follow the directions that are given in the assignment that follows the statement.

> *We have met the enemy and he is us.*

Assignment: What does this statement imply about human beings? Do you agree or disagree with its implications? Support your position with examples from your experience, observations, or reading.

A year earlier, the Composition Board reintroduced the English Composition Test with Essay with the following quotation and assignment surrounded by essentially the same directions as those above. The following was read aloud before the exam:

The test you are about to take requires you to write an essay on an assigned topic. The topics have been chosen because of their general significance, because they are controversial, and because they will give you the opportunity to construct an argument either for or against a position. It is important to find out now just how effectively you can do this kind of writing because you will be asked to write persuasively in limited periods of time throughout your career at Michigan.

Your essay will be read and judged independently by two experienced teachers of writing. Their primary interest will be in the organization and support you give your argument. They will expect you to express your own point of view and support it with good reasons.

This examination will be used to place you at an appropriate level in our writing program. Some of you will take a special seven-week class where the writing skills needed for success at Michigan are taught in small classes by experienced teachers of writing. Others will be placed in an introductory composition class; and very few will be exempted from either of these classes. Your placement is a commentary on your writing skills, not an indication of your intellectual competence. It is the College's way of providing each of you with the experience you need to respond successfully to writing assignments in your classes here at Michigan.

We must live in the present. If we dwell on the past, we will lose the present.

Assignment: To what extent and in what ways do you agree or disagree with this statement? Explain and illustrate your answer from history, literature, observation, or experience.

Modestly Specified Prompt: University of Michigan English Composition Board

For placing entering students at the correct writing level, the English Composition Board (ECB) at the University of Michigan[31] elicits an hour of writing with an instrument such as this:

Write an essay that represents your position on the death penalty. Your audience is a group of young people who will soon have the opportunity to vote for or against abolition of the death penalty.

Begin your essay with the following sentence (which you should copy into your blue book):

> *The interpretation of current laws often allows convicted murderers back on the streets within a short period of time.*

Select one the following as your next sentence and copy it into your blue book.

1. *Although we must denounce crime and sometimes demand more severe penalities, we must also temper justice with mercy.*
2. *Capital punishment, dismissed by many as an inhumane deterrent, keeps convicted murderers from murdering again.*
3. *Punishment is not an effective way to treat criminals; they need, instead, a rehabilitation program that turns them away from crime.*

Now complete an essay that develops your position. Do your best to make your argument convincing to your audience.

Framed Topic: Florida's College Level Academic Skills Test (CLAST)[32]

Directions for Essay

You have 50 minutes to plan, write, and proofread an essay on **one** of the topics below.

Topics:

1. A book that many students read that may affect them beneficially.
2. A common practice in American colleges that should be changed.

In your essay, you should introduce your subject and then either explain the subject you have chosen, or take a position about your subject and support it.

At least two evaluators will read your essay and assign it a score. They will pay special attention to whether you

- state your thesis clearly;
- develop your thesis logically and in sufficient detail;
- use well-formed sentences and paragraphs;
- use language appropriately and effectively; and
- follow standard practices in spelling, punctuation, and grammar.

Take a few minutes to think about what you want to say before you start writing. Leave yourself a few minutes at the end of the period to proofread and make corrections. You may cross out and add information as necessary. Although your handwriting will not be scored, you should write as legibly as possible so that evaluators can read your essay easily. You may use the following page to plan your essay before you begin to write in the answer folder.

Sample Disciplinary Writing Prompts: Criminal Justice

Court Administration

As a candidate for judicial office, you are speaking to members of a local professional club, most of whom have a passing knowledge of courtroom processes. Describe two reforms you would initiate to streamline that process. Also explain the potential side effects, either beneficial or detrimental, to courtroom purposes. You are speaking to the professional club in an effort to secure their endorsement of your campaign.

Three objectives :
1. to familiarize you with courtroom processes
2. to help you identify problems in the court's administration
3. to help you develop solutions to these problems

Requirements: In order to write the assignment you must
1. be familiar with the text and lecture material on courtroom trial procedure;
2. be familiar with the issue of delays in court; and
3. be able to integrate your proposed solutions into the context of the question.

Evaluative Criteria: Your essay will be evaluated for

1. a clear understanding of the issue;
2. a clear statement of reforms;
3. a logical presentation of the potential side effects; and
4. the ways in which your reforms would alleviate courtroom delays.

Sample Disciplinary Writing Prompt: Nursing[33]

Critical Analysis in Critical Care Nursing

Identify one issue in Critical Care Nursing.

1. Five-seven double spaced, typewritten pages (1 point)
2. Depth of thought (3 points)
3. Solid introduction and conclusion (1 point)
4. Accurate and sufficient knowledge (3 points)
5. Use all critical analysis questions (4 points)
    - A. Central issue
    - B. Underlying assumptions
    - C. Evidence valid
    - D. Conclusions acceptable
6. Correct grammar, punctuation, and spelling (2 points)
7. Proper documentation (1 point)
8. Loss of 1 point for every day late, including weekends

CHAPTER 10
SEQUENCING WRITING ASSIGNMENTS

Virtually all the writing academics do is built on the writing of others.
English educator Mike Rose[1]

Every discipline, every venue through a body of knowledge has a sequence implicit, if not explicit, to it. Every program of study therefore operates on some sort of ordering principle, even if only an informal one because every course moves forward in time (see also Select Course Descriptions in Appendix Part 3).[2] Students move progressively from the more fundamental to more advanced skills, knowledges, and attitudes. Students pass these cognitive benchmarks at increasingly higher levels of abstraction by building up to them sequentially. Most common is an analytic breakdown of the finished product into a succession of increasingly complex organization of sub-skills that build in conceptual sophistication.[3]

Writing tasks are no exception. Within a course, cumulative assignments may be long, planned papers that are done piecemeal, with instructor or peer feedback along the way (see Course Proposal Guidelines and Select Course Descriptions in Appendix Part 3). Short writing tasks may be assigned[4] that interlock and build on one another over the course of a semester. The scientific method, for example, has its own logical sequence and may be undertaken that way. Indeed, the natural sciences require students to write lab reports that sequence the steps in an experiment and detail the results. Grant proposal writing can also become a progressive exercise, as can a psychological workup. Another application of this model is to assign writing tasks as independent activities that are sequenced in order of increasing difficulty, though they are inherently unrelated. Still other academic writing can move from narrative to informative to persuasive and argumentative forms.

Across a program of study in the major, writing assignments, like cumulative assignments, may also be sequenced because no single course may be able to accommodate the range of writing required by the entire field. This also spreads out advanced disciplinary writing so that no one course and/or professor is unduly charged with that responsibility.

The purposes of progressive writing assignments are then to: develop students' analytic thinking and syntactic fluency; increase their conceptual sophistication/abstract thinking; familiarize them with various professional and academic writing forms; improve their facility with integrating texts; control error; and curb plagiarism. While more accomplished writers increase their proficiency and versatility by this process, beginning writers seem to be helped most.

Sequential writing assignments may be based on

- the cognitive/developmental principles of the natural learning order (see Chapter 5);
- the principles of discovery: simple to complex, known to the unknown, and so on;
- modal development: narration, description, exposition, and argumentation;
- inductive or deductive reasoning; and
- the "general sequences" approach.

MODELS OF INQUIRY

■ **Top down** or **Deductive Reasoning** is generating hypotheses based on a principle believed to be true.

Introduce a General Principle, Law, Construct, or Concept that We Want to Teach

1. Ask students to list examples from experience that illustrate the law.
2. Ask them to explain it to themselves.
3. Ask them to devise another test to validate the principle.

Think about a Theory

1. Ask students to refine a theory/limit it.
2. Ask students to extend a theory.
3. Ask students to challenge the theory.
4. Ask students to generate an analogous theory.

Form Hypotheses

1. Students formulate general rules relating particular factors to given values of a dependent variable.
2. Students test hypotheses.
3. Students make predictions.
4. Students consider alternative predictions.

Make Decisions (Social Sciences and Language)

1. Students define a goal.
2. Students identify options.
3. Students analyze options.
4. Students rank options.
5. Students evaluate top options.
6. Students choose best option.

Learn a Critical Thinking Skill[5]

1. We introduce the skill.
2. We explain the procedure and rules of the skill.
3. We demonstrate how the skill is used.

4. Students apply the skill following the explained procedure and rules.
5. Students reflect about what goes on in their heads as the skill is executed.

■ Inductive or Bottom up Sequences

Induction is the act of observing events and then making inferences to generate hypotheses based on those observations. As forms of induction, narration and description may be considered the building blocks for handling complex writing tasks. George Hillocks' work is a touchstone in this regard (see also Chapter 5).

General Sequence I (see also Chapter 2 on Invention)[6]

Static	**Progressive**
Description	Narration
Division	Process
Classification	Cause and effect
	Syllogism

General Sequence II

1. Report on a particular subject.
2. Profile routine happenings in relation to the subject.
3. Collect readings thematically on the subject.
4. Develop generalizations expressing ideas common to the readings.
5. Support generalizations. Generate statements that seem true and something students have thought about, read about, or have personally experienced.
6. Theorize.

General Sequence III[7]

1. Listing.
2. Definition.
3. Seriation. Differences between concatenation, correlation, and causality.
4. Summary to synthesis on a continuum. Differences between summary, summary with opinion, and true synthesis.
5. Classification. Differences between labeling and defining; grouping and partitioning.
6. Comparison/Contrast. Different kinds of knowledge (e.g., sensory perception, aesthetic judgment, rational thinking).
7. Analysis. The breakdown of components; the use of a particular theory or opinion to guide examination of a topic.
8. Academic argument. The marshaling of another person's facts and opinions.

Information Processing

1. Give concept examples.
2. Identify common attributes.
3. Classify attributes.
4. Relate attributes to each other.
5. Specify critical attributes.
6. Compare/contrast them (classify, seriate, observe).

Learning a Critical Thinking Skill[8]

1. We introduce the skill.
2. Students experiment using it.
3. They reflect on and articulate what goes on in their heads as the skill is executed.
4. They apply their knowledge of the skill to use the skill again.
5. They review what goes on in their heads as the skill is executed.

■ Bi-Directional Sequences[9]

Bi-directional assignments can be designed for writers to make inferences using either inductive to deductive or deductive to inductive reasoning.

General Sequence

1. Conceptualize a text.
2. Support it with arguments.
3. Break idea into parts and categorize the arguments.
4. List all occasions when arguments are used or implied for use.
5. Generalize the basis for their use.
6. Find discrepancies, ambiguities, lapses in logic.
7. Compare two or more competing views.
8. Criticize or defend an author, a theory.
9. Resolve a problem.
10. Speculate on the probable or most acceptable outcome of a given set of circumstances.

Content Thinking Skills

1. Concept development
2. Pattern recognition
3. Macro-pattern recognition
4. Synthesizing
5. Procedure generating

Exploring Examples and Processes

1. Real-world examples: presentation and discussion.
2. Group analysis of mental processes used in solving example problems.
3. Labeling and defining processes.
4. Overlap with and discrimination from other processes.
5. Other practical examples, analyzed in process terms.
6. Group-generated examples.

Learning a Writing/Thinking Skill[10]

1. Introduce the skill, label the skill (for example, identify the problem), model the skill; students repeat the label, name synonyms, define, state its professional and academic utility.
2. Execute the skill, reflect on it, practice, difficulties, etc.
3. Practice the skill on course content.
4. Review the skill, identify key characteristics of the skill, rules, process, predictions, occasions for its use.

5. Apply skill.
6. Transfer the skill to new contexts.

SAMPLE SEQUENCED WRITING PROMPTS

Across a Course of Study

Environmental Studies[11]

Second-Year Students

1. Write abstracts or summaries of scientific literature.
2. Produce a laboratory notebook for recording observations and laboratory reports using standard scientific format.

   Sequenced Task:
   Week 1 Method
   Week 2 Methods and Results
   Week 3 Methods, Results, and Interpretation
   Week 5 Literature Review integrated into the above

3. Write a position paper in a biological context.
4. Prepare an educational piece using a non-scientific format (e.g., student guide for dissecting a blue crab or squid; can be collaborative).

Junior-Year Students

1. Write a research/grant proposal and then undertake the research.
2. Prepare a c.v. and letter of job application.

Senior-Year Students

1. Write a manuscript in an appropriate format for submitting to a scientific journal.
2. Give and receive critiques.

Macrodisciplinary Prompts Within a Course

Social or Natural Sciences

1. Describe one experiment, research project, or theoretical position.
2. Describe another experiment, research project, or a theoretical position.
3. Compare or contrast the two.

4. Analyze the effect or impact of such experiments, projects, or positions in the field of which this work is a part.
5. Prepare a final term paper including all of the above in an organized, integrated discussion.

Social Education[12]

1. Gather and reporting information.
2. Classify tasks.
3. Generalize from them.
4. Show relationships among generalizations.
5. Form systems of generalizations.
6. Generalize for speculative thinking (theoretical).

Business[13]

1. Facts→select useful facts and organize them
2. Analysis→make sense of important facts (interpret them within their context)
3. Conclusions→draw results, implications of analysis (not merely summarize)
4. Recommendations→state and justify action based on findings

■ Sequenced Writing Prompts Within a Course

Arts and Performance

Art[14]

Personal Narrative: Recount in a two- to three-page paper the events in your life leading to your decision to major in the visual arts. Your paper may be written in any form that seems appropriate, such as a diary, journal entry, letter to a friend, or press release.

Description: Write a two to three-page paper that describes at least two examples of your art. Explain verbally what happens visually in the works by analyzing the design elements, by defending your choices of scale, format, and materials, and by addressing the content of the pieces.

Comparison and Contrast: Use two examples of your artwork as the subject of this paper. Identify the similarities or connections between these two works and comment on why these themes or techniques recur. Also, make distinctions between these two works and offer insight as to why these differences are significant. Conclude your paper with an assessment of how these two works reflect your overall interest in making art.

Short Research Paper on Your Influences: Identify at least two artists who have influenced your work. Research them at Drake Library or at our Visual Resource Center. Cite specific examples of their work to illustrate your points. Your paper must include at least three sources.

Undergraduate Thesis in the Visual Arts: Your thesis paper should cover your development as an artist up to this point. Draw on all your previous papers to prepare for this thesis. Trace your own progress by identifying individual works that were breakthroughs or in some way exemplary. Include a discussion of the sources and subject matters embodied in the work. Acknowledge the artists who have influenced you. Include supporting documentation.

Artist's Statement: Now that you have written a thesis paper, reduce it to its essence and write an artist's statement. Imagine that this statement will appear in the catalogue for your upcoming one-person show. Visitors to the gallery will be able to see the artwork for themselves. In one paragraph, guide visitors through your works on display.

Communication[15]

Purpose: To understand the relationship between TV and school-aged children; to deepen understanding of the research process.

Term Paper Prepared in Three Installments

1. Prepare a research paper on the effects of TV viewing among elementary school children, including pertinent theories of child development (Piaget) and mass communication. Analyze and summarize the main arguments.

   Evaluation: Thoroughness, ability to discern and explain patterns in the data, ability to write coherently.

2. Conduct a pilot study of TV viewing habits among elementary school children to determine how children discuss TV content: what children do when they watch and what part TV plays in their relationships with friends, family, games, and other activities.

   Interview viewers concerning viewing habits. Before the scheduled observation, develop a list of open-ended questions: Do you watch? If so, what? When? Why? etc.

   Observation
   Time period: minimum of 1 hour
   Basic Data:
      A. child
      B. age
      C. sex
      D. general socio-economic background

   Location
      A. How many sets are there in the house?
      B. What rooms in the house is the TV located in?
      C. Where does the child sit in relation to the TV?
      D. Is the child watching alone or with others? If with others, whom? What is the observed relationship between them (physical and social)?
      E. Who controls the TV set?

   Write down everything the child says and does every 5 minutes.
   Observe who turns the TV set on and off and controls the channels.
   Observe what the child does when he or she watches. Write up your notes.

   Evaluation: Completeness and clarity of your description and the analysis of your observations.

3. Report the findings from your pilot study. Compare the child's viewing habits to discover patterns. Explain these patterns or lack of them and provide evidence to support your discussion from your specific observations. Compare the results of your pilot study with your analysis of the research from the mass communication literature.

Compile the above elements into one comprehensive paper. You will turn in your field notes along with your report.

Letters and Sciences

Biology[16]

This assignment involves a semester-long project on a threatened or endangered species; a key aspect of the assignment is that some element of controversy should be associated with proposed plans to protect the species such as the Northern Spotted Owl.

Part 1. Overview

1. A clear statement of the issues involving the species
2. A description of the species' current legal status at both the state and federal level, along with definitions of relevant categories

Part 2. Summary of Natural History

Explain the species' biology relevant to conservation, including but not limited to

1. Habitat preference
2. Current geographical distribution
3. Historical changes in distribution
4. Reproductive biology
5. Population biology, including estimates of current population sizes
6. Basic social organization, with emphasis on the mating system

Part 3. In-depth examination of a controversial issue related to the conservation of threatened endangered species

Controversy is an inherent part of conservation biology, involving either the science itself (assumptions, methods used, conclusions, etc.) or management implications of the science as they relate to legal, political, social, economic, and ethical considerations. The assignment is structured so as to oblige you to analyze an issue in conservation biology, understand the potential consequences of management decisions, and state its opinion regarding the controversy. The analysis must include:

1. An introduction (basically a revision of Part 1 above)
2. A summary of the biological issues involved in conserving the species (a condensed version of relevant information presented in Part 2 above)
3. An examination of the controversy itself, involving arguments about the biological, economic, political, or ethical implications of management recommendations
4. Your opinion on the issue. You should attempt an honest evaluation of the pros and cons of the issue before drawing any conclusions

Sources should be cited throughout and listed in the references at the end of the paper.

Biology[17] Teaching Writing about Science to Nonscientists

1. After you read and analyze professional essays by Stephen Jay Gould and Lewis Thomas, you are to practice writing paragraphs modeled on the style of each writer.

2. Using your knowledge about the writing subjects and style of these professionals, then write about a recent scientific issue designed to inform nonscientific readers.

3. You should write about the sociological, cultural, legal, or historical aspects of your first topic, placing what you know into a larger context (e.g., Should third world countries clear cut their forests because half our pharmaceutical drugs come from wild plants?).

Computer Science: Writing Computer Documentation[18]

Choose a software program small enough, so that your document will be no more than six pages long.

Part 1. Write an introduction to the program explaining what it does, how it is useful, and what its limitations are. Assume that the user has no knowledge of the program's workings but is an experienced user of whatever platform your program runs on. At the first occurrence of each technical term, highlight it to indicate that it is defined in the glossary.

Part 2. Write a description of what an individual needs to do in order to use the program effectively. Users should be able to scan this part, find their task or result easily, and immediately see the steps required to achieve it. Organize this part according to how the user will encounter the program, not according to how the program is structured internally. Use an unambiguous notation for user actions versus program responses. Verify that this section covers all program features and exactly matches its behavior. Handle technical terms as in Part 1.

Part 3. Write a glossary containing definitions of all technical terms used in Parts 1 and 2. Write your definitions using words that nontechnical individuals can understand. Make sure that each definition specifies all and only the items, cases, features, etc., that the term refers to. Avoid circular definitions. Make sure your definition is not a description of what is typical but includes exactly the essential features.[19]

Part 4. Prepare a table of contents and complete index and, in the process, edit the first three parts to include cross-references in the text and an index to help users find related material easily. Your goal is for readers never to be stumped about finding answers to any question.

English: Literature[20]

1. In order to prepare a paper on the narrative in *Bleak House*, do the following:
   - A. Locate two passages that best characterize the voice and perspective of Esther Summerson as she tells the story. Write them out.
   - B. Locate two passages that best characterize the voice and perspective of the other, unnamed narrator. Write them out. Working primarily from one passage for each narrator, write a paper that compares the way they see the world of *Bleak House* and the way they tell a story. Be sure to look at sentences as well as sentiments; that is, pay attention to the language each uses to locate a perspective and a world.
   - C. Then when you've done this, go on to speculate about how the presence of two narrators controls your reading of the story.
2. Look at the first and last chapters. Who gets the first word and who gets the last word and what difference does it make? What difference does it make to you as you attempt to make sense out of the novel?
3. In the passage by J. Hillis Miller, he shows one account of the effect on a reader of two narrators. Write an essay about the way his reading differs from yours and about what difference the difference makes to you. What does Miller notice that you didn't? What did you notice that he leaves out? What special terms does he use that you don't? What difference do they make?

4. On the basis of these three papers, write an essay to help us better understand the narrative technique of *Bleak House*.

English: Comparative Literature[21]

This writing assignment is a comparative analysis of the treatment of a cultural icon/belief in two short novels written by two different contemporary Spanish-American authors, preferably of different genders, for example, family honor in *Cronica de Una Muerte Anunciada* by Gabriel Garcia Marquez and *Eva Luna* by Isabel Allende.

1. Prepare a bibliography on the life and works of each novelist, including five specific novels and five sources on the concept of family honor in Hispanic cultures.
2. Compile an annotated bibliography from the most appropriate sources (five for each author and three regarding family honor).
3. Outline your paper which must include a one-page biography of each author, a summary of the two novels being researched, a review of the literary criticism applicable to family honor, a comparison of that treatment in the two novels, and a conclusion.

History: US History to 1877[22]

For the instructor: Preteach computer enhanced construction of simple tables of percentages.

1. Using spreadsheet software, set up a population table and calculate for each state percentage changes from one decade to the next. After color coding an historical map, provide both historical statistics and geographic evidence for the changes. Then describe your findings.
2. Answer three questions:
   A. What occupational changes occurred among the immigrant population between 1830 an 1860?
   B. To what extent might these changes influence the rise of different additional evidence to understand nativism?
   C. What additional evidence do we need?
3. Design the spread sheets to show the distribution of immigrants working in each occupation category in 15-year intervals. Then consider changes vis a vis immigrants and natives.
4. Finally, examine the extent to which we see change after the Civil War?

Physics[23]

1. Choose as your subject a "named" physical principle (Pascal's Principle, Fermat's Principle of Least Time, Heisenberg's Uncertainty Principle, etc.). Without using equations, write a careful and accurate statement explaining the principle, and show how it may be applied to several specific physical examples.

   Research required: This assignment does not require extensive research, although reference to one or more basic physics texts might be helpful.

   Length: 1-2 pages
   Due: 1 week
   Audience: Instructor
   Grading: Based on the accuracy and completeness of the definition and the clarity of the illustrations.

2. Trace the history in physical thought of the *named* principle. Use the following questions to guide your research:

   A. What are the intellectual antecedents of the principle?
   B. Why is the principle associated with a particular person?
   C. What concepts or other elements of the physical world view changed as a result of applying this principle?
   D. What previously unsolvable physical problems gained solutions as a direct or indirect result of the application?

   Note: Start with the *Dictionary of Scientific Biography* and proceed to the history of science journals (*ISIS, British Journal for the History of Science, etc.)*
   Length: 3-5 pages
   Due: 2 weeks
   Grading: Based on the quality and completeness of the historical research and the coherence of the writing.

3. Draft a survey paper of your "named" principle, incorporating material from the three previous assignments in an appropriate way. Your objective should be to communicate the results of your research clearly and completely. Organize the material coherently. Give particular thought to which definitions must be included.

   Research required: No additional research
   Length: 5-7 pages
   Time Allocated: 2 weeks
   Audience: An intelligent but uninformed peer who knows about as much as you do

4. For the same physical principle, examine the research literature to determine how the principle is being extended, modified, or otherwise employed in physics today.

   The paper should include the following:

   A. An appropriate mathematical formulation of the principle
   B. A review of any significant changes in the formulation of the principle that have recently been introduced
   C. Speculation about how the principle might find new application in emerging specialties in modern physics or engineering (microengineering, cryogenic environments, etc.)

   Research required: The assignment requires rather extensive research on current applications of the chosen principle. Start with *Physics Abstracts* and then proceed to specific journals or to inter-library loan. Caution: Although books may provide useful background on recent thinking in physics, they tend to be out of date as soon as they are printed. So you *must* go to journals for recent work.

   Length: 3-5 pages
   Due: 2 weeks
   Grading: Based on the appropriate presentation of mathematical information

5. Using the instructor's feedback as a starting point, revise your draft into a final copy. When you have a finished copy, write an abstract. It should be no longer than one paragraph and should describe the salient features of your paper so that a potential reader can form an opinion about whether or not to invest time in reading the entire document.

Length: 5-7 pages (paper)
1 paragraph (abstract)
Grading: Based on coherence, completeness, and appropriate style and usage. Abstract will be graded separately
Audience: An intelligent but uninformed peer who knows about as much as you do

Political Science[24]

1. Exploratory Essay

The political rhetoric of both the right and left (Rush Limbaugh and Bill Clinton) claim to be pro-family. In an *exploratory essay* of approximately 4-5 double-spaced typed pages, consider what it means for a political program to be pro-family. Since an exploratory essay does not necessarily come to a conclusion, and is not, therefore, thesis-driven, begin your essay in a special way. Rather than beginning with a thesis, begin with an anecdote or a narrative that embodies a pro-family stance. Develop your paper by clarifying or explaining the implications of your opening and then follow your ideas wherever they lead you.

2. Proposal

The previous paper explored the impact of the government on one aspect of the family, divorce, student financial aid, maybe even Medicare or AIDS. In this paper define the problem that you identified in the previous paper. Identify its causes and solutions that only a governmental agency can provide. Identify an audience who can act on your proposal or who can persuade someone or agency to act on it. Present your proposal in which you describe your plan.

Political Science: Public Policy Administration. The Poor in America[25]

"[P]utting the employable poor to work is a problem in public administration, not social reform. It requires mobilizing clients to participate in work programs and providing them with necessary support services, after which employment is usually possible . . . . Voluntariness . . . honors competence by assuming recipients are already motivated to work. But like voluntary training, voluntary workfare may really reflect a lesser view of competence than programs that make serious demands on the dependent. I think obligation is essential to workfare's achievements [emphasis added]" (Mead, *The New Politics of Poverty*, p.171).

Is obligation enough to move people from welfare to work? Your answer to this question involves four sequential writing assignments:

1. A 3-4 page paper in which you a) define the term "obligation" within the context of putting the employable poor to work; and b) describe how one or two work-to-welfare projects stipulated and implemented obligation. Use Mead and Auletta's *The Underclass* or the 3-part series in *The New Yorker* (November-December 1981) as your reference (on library reserve).
2. A 4-7 page paper that builds on paper #1. Revise paper #1 along the lines suggested by the class and instructor and extend it by describing how the Monroe County government includes obligation in its welfare-to-work programs. Your information will come from the class lecture by Rick Spencer, director of employment for the Monroe County Department of Social Services, and the field visit to the CAP office.

3. An extension of the analysis with findings from the Manpower Demonstration Research Project on the effectiveness of various kinds of work-to-welfare programs. Your source is Gueron's *From Welfare to Work*. This paper, including a revision and extension of paper #2, should be 7-9 pages long.
4. The culminating paper, a 10-12 page persuasive essay (plus endnotes and bibliography) on the validity of Mead's assumption. This paper reorganizes the material in the first three papers. Note that a persuasive essay takes the following form: a) thesis statement; b) supporting evidence for your position and evidence discrediting the other position; c) summary.

Political Science: Public Policy Administration Intergovernmental Relations (graduate level) [26]

Paper 1: Select one recent federal statute that mandates implementation of a national policy by the states. Describe the provisions of the statute and associated regulations and discuss their implications for the states (financial, administrative, policy-making). Then present and analyze the responses of New York State to the federal policy (suggested policy areas: welfare reform, environmental protection, transportation, health care).

To set the stage for a second more extensive analysis of intergovernmental relations, discuss fully and carefully the nature of the federal legislation, including the intent of Congress; sketch New York's legislative and regulatory responses; and establish the questions regarding state and/or local responses that you will pursue in the second paper. In this first paper you should rely on secondary sources, government documents, journals, newspaper accounts, and *Congressional Quarterly Weekly Reports*.

Paper 2: As a bottom-up research project on inter-governmental policy and management consequences of the federal statute you have presented, here you focus on the local government in the Greater Rochester area. Your analysis of local responses and their effects should be developed against the backdrop of local conditions and policy preferences and should consider the role of New York State. Data collection for this paper involves examining documents and interviewing elected and/or appointed officials.

As you conclude this paper, think about how the responses of the local jurisdiction fit into a broader context. Do you think that decentralization mitigates the effects of national problems? Does it encourage innovation and creativity?

Psychology: Case Study[27]

1. Observe a child/animal/nursing home resident.
2. Classify the behavior (not chronologically).
3. Draft the above, using subheads.
4. Summarize the behavior patterns.
5. Interpret them.
6. Identify the theoretical framework that might best explain the behavior.
7. Draft the above using subheads.

Then:

8. Look for underlying variables in invariables (schizophrenics analyzed for degree of hallucinations).
9. Look for commonalities among established variables (variables that measure social cohesion).
10. Identify an hypothesis (e.g., schizophrenia is best treated through psychoanalysis).

11. Find counter examples and explain.
12. Break down a concept (role conflicts: mother as nurturer, professional, etc.) and generate variables (dependency, rigidity) based on different comparisons.

Psychology: Social Psychology

The Impact of the World Wars on the Mental Health Movement

1. Define the mental health movement.
2. Trace its 20th century history.
3. Explain the impact of wartime on mental health.
4. Summarize the theoretical base.
5. Forecast.

Sociology

1. Define [the family].
2. Describe varieties of [family life styles].
3. Outline the stages in the [development of family life styles].
4. Explain how differences in [families] are reflected in [values] that [families] place on [clothing].
5. Identify components of the decision-making process for [clothing purchases].
6. [Relate] decisions that [families] make about [clothing] to the broader cultural, social, psychological, or economic context.

Sociology

1. Observe a campus location (lounge, dining hall, game room, etc.) at different times and days of the week. Synthesize individual observations in your group. Hypothesize the relevance of the observed activity to specific college goals.
2. Summarize an article from the sociology reader on nonverbal communication.
3. Compare the article in Assignment 2 and the film on American regional dialects.

Sociology

1. Expand the definition of a sociological term relevant to the readings on suicide.
2. Summarize empirical research on suicide.
3. Analyze the article summarized in Assignment #2 from a sociological perspective.
4. Analyze the data using statistical software.
5. Analyze the rhetorical stance of the article from handouts on the criteria for effective writing.

Sociology

1. The Report. Purpose: To give readers an impression of a particular place. Visit a place of business or particular location in town. Observe your surroundings. Talk with people present. Write an account of your visit. Try to convey the atmosphere of the place.
2. The Profile. Purpose: To give readers an impression of what happens routinely. Return several times to the same location. Repeat the Report exercise.
3. Collections of Incidents. Purpose: To demonstrate similarities between seemingly different situations, incidents, or people. Recall several incidents that have at least one thing in common. Generalize about the commonalities of the subject.
4. Profile of Readings. Purpose: To anchor the subject in authority. Read three articles on the subject. Find any patterns in their views.

5. Thematic Collection of Readings. Purpose: To demonstrate the similarities among three articles on these different subjects. Develop a generalization expressing an idea common to all these essays.
6. The Supported Generalization. Purpose: To argue the accuracy of your generalizations about a given subject. Make a general statement that seems true to you about a given subject that you have read, have personal experience with, as well as thought about. Support this generalization in a paper of 5-7 pages.

Professions

Business and Economics

1. Define the stock market and the stock market crash.
2. Trace the evolution of the stock market.
3. Describe the impact of World War I on the stock market crash.
4. Analyze the impact of the crash on the middle class, industry, politics, etc.
5. Identify the theoretical bases for such an impact.
6. Compare with the stock market crash of October 1987.
7. Forecast the next crash.

Business and Economics

1. Describe the government impact on home building.
2. Add the recent history of this issue to the front end of the paper.
3. Add pertinent government documents to support the government's case.
4. Add forecasting.
5. Add a theoretical base.
6. Edit to make the paper flow as one unified and coherent piece.

Economics

1. Explain particular economic theories and/or economic concepts.
2. Describe the technicalities and methodologies of economic models and illustrate using graphs and equations.
3. Relate economic theories to historical and contemporary issues.
4. Contrast three different economic arguments.
5. Present an economic argument, supporting it with theoretical arguments, data, and historical examples where appropriate.

Economics

1. Decide whether we have a health care crisis. You might begin by defining *crisis*. Look the word up in the dictionary and relate its current meaning to its Greek origins. Are politicians using the right word? Or do they mean *catastrophe* when they say *crisis*? Summarize any data that might indicate a crisis or problem. You might do this under the headings of health, efficiency, and access. Or you might explain the problem in terms of its historical development. Then explain the reasons for the problems that emerge from the data.
2. Use Alain Enthoven's work to outline his proposal and rationale. Summarize the major elements of his proposal. What is the likelihood that Enthoven's proposal would address all the problems you outlined in your first paper? Would it create any new problems?

3. Summarize the major components of the Medicare program. What problems does it solve for the elderly? What problems are left unsolved? Suppose the system were expanded to cover the entire United States. Would this create new problems? Take the major problems you outlined in paper #1. What is the likelihood that the expansion of Medicare would solve the problems it addresses? Which would remain? Would the expansion create new problems?
4. From the text chapter on comparative systems, pick the national system that seems best suited to our situation. Were we to copy that system, which of our problems would it solve? What new problems would it create?
5. Assume you are writing to a congressperson or other client. Summarize the reasons why some action will be necessary in the health care field. Explain the alternative solutions to the problem and the consequences of choosing any of the alternatives. If you take a position, you must explain why you rejected the other options.

Education

1. Write a detailed, perceptive, and accurate report of a classroom observation.
2. Starting with one aspect of the classroom observation, explore an educational issue. Use concepts from your readings to analyze the experience.
3. Work up a case study of particular students involved in that educational issue.
4. Develop a curriculum sequence that corrects/remedies the problem.

Health Sciences: Population Growth

For the instructor: Give students a general statement about the assignment. Then pose additional questions. Warn students not simply to answer the questions. Questions are raised to suggest some issues that students might discuss or the direction that students' essays might take.

Essay 1. Explain the difference between arithmetic and physiological density. Why is the distinction between those two concepts important in studying population patterns? What does one measure of density tell us that the other does not?

Essay 2. Using the Demographic Transition model as a basis for your argument, explain why the world has experienced a population explosion during the past 50 years. In terms of the Demographic Transition, how do world demographic patterns differ now from what they were a hundred years ago? A thousand years ago? What has brought about the change in world demographic patterns that have led to the current population explosion? You may find it useful to refer to the graph of the Demographic Transition (not shown). If so, be sure to include the graph with the essay that you hand in.

Essay 3. Examine the maps of calorie consumption and life expectancy in the text (not shown). Using the information contained in these maps, determine how many countries fall into each of the sixteen categories or cells of the attached table (life expectancy vs. average daily per capita calorie consumption).

Using the completed table as your primary source of information, discuss the association between spatial variations in food consumption and life expectancy. Is this association a strong one? What factors other than food consumption might affect life expectancy? Do you see any evidence of the influence of such factors in the tables?

Be sure to refer explicitly to the information contained in the table: cite specific numbers or percentages, make comparisons between particular categories of life expectancy or calorie consumption. Hand in all tables and notes with your essay.

Nursing: Power and Politics in Nursing[28]

Consider beginning work on #4 as you complete #1.

1. Choose two articles from the bibliography. Read them, state the title and author, and answer the following questions:
    - A. How was power used by the nursing profession in the article?
    - B. What single change could nurses or nursing make to enhance its power base relative to the situation(s) described in the piece?
2. Investigate the topic of power and politics from an historical perspective. Describe the health care climate, the major persons, and the use of power before 1910 in the U.S. or in another country.
3. Review the 1993 Legislative Agenda of the New York State Nurses Association (NYSNA). Choose one state-level issue you feel strongly about and assign a fictitious bill number to it, using 1234A for an Assembly bill and 5678S for a Senate bill. Write a persuasive letter to the person who represents Brockport or your home district, asking the legislator to support or oppose the bill. Legislators are very busy, so you need to convince them effectively but concisely. Your letter must be addressed to the correct legislator by name, district number, and legislative branch.
4. The Clinton administration has grappled with health care reform. Suggestions for reform included managed competition, the pay or play option, the Canadian model, and others. Choose the option that you believe best serves the public, keeping in mind that the public consumes nursing services.
5. Review the history of health care reform, locating the earliest reference to it and tracing its development forward to today. Identify its strengths and weaknesses. Analyze how the nursing profession might be affected by it. The paper should include the information asked for in papers #2, #3, and #4, as well as an introduction and a conclusion.

CHAPTER 11
RESPONDING TO AND EVALUATING WRITING

Show me a [paper] written in September by a student who still admires it in June, and I'll show you a case of no hope.
John Ciardi

To red pencil a paper that will not be corrected is like manicuring a corpse.
Catherine Lynch and Patricia Klemens

If you are reading every piece of writing students do, they are not writing enough.
Jane Zeni

When I rely too much on tests and grades, I encourage that sad tendency in so many students to assume that reading and writing are nothing but activities for getting judged on (rather than activities students could learn to use for enjoyment and practical ends).
Peter Elbow

Evaluation is the act of making a judgment about the worth or value of something, someone, a performance, and so on. Evaluation is external. We place a value on something. In writing, as students revise and edit, ongoing evaluation lets them know where their work is headed. This evaluation may not necessarily be recorded. Some evaluation instruments are simply designed to help students know their weaknesses and their strengths. Others are meant for institutional purposes over which instructors have little control. Evaluation, however, is also not a synonym for grading. We, the students themselves, and their peers can evaluate according to specified criteria, such as primary traits or those on Editing/Evaluation checklists (see Appendix Part 1).

Evaluation vis a vis writing refers to two very different activities:

1. responding to writing; and
2. measuring its success (grading or rating).[1]

The first, responding to writing, means feedback; we facilitate. We indicate which pieces or parts of pieces hold the most promise, and we guide revision. Assigning grades should be the second or latter stage of the complex process that begins not when students turn in their papers but when we formulate a writing assignment (see Chapter 9).

As is responding, grading writing is not an exact science. When we respond, we respond to students' tasks of revising early drafts and editing later drafts. And we grade final drafts. The editing guides below and in Appendix Part 1 can serve as intermediary response forms as well as guides for grading. We might try some of these options: Use the same rubric or criteria for grading a semester's work as we do for evaluating papers. As the semester progresses, we can "graduate" to more sophisticated expectations. We can apply different rubrics evaluating different criteria for different kinds of papers (see evaluation grids and Primary Trait Scoring). Or we can use different rubrics for intermediary drafts (that is, evaluating drafts only on content) and for the final copy (evaluating the final copy on both content and correctness).

■ The Purposes of Evaluating[2]

- to diagnose problems
- to place students in appropriate courses
- to keep running accounts of students' progress
- to show students what improvements they have made
- to recognize good work
- to find out if students understand a specific task
- to train students to evaluate their own or peers' work, thereby internalizing the evaluative process
- to assess the success of a lesson, thereby helping us demonstrate we are doing our jobs

RESPONSE TO WRITING

Responding to writing may be subdivided into who responds (peers, instructors, wider public), how the reader responds (in writing, in conference, on tape, via editing guidelines), and when (under what circumstances). The point of responding to writing is ultimately to help students correct most of their own work with the least help. In other words, we should evaluate writing to help students become independent evaluators of the writing of others and their own writing--and incidentally help us avoid doing all the work ourselves.

Why *do* we red mark so fastidiously?[3] The red marks are really meant for other instructors, administrators, parents who look over our shoulder and make sure we are doing our job. It is thus a response to the guilt we feel if we don't. In some way this overzealous marking means that our own skill is on the line. It tells the powers that be and our students that we are competent.

At the extreme, the problem of overgrading results in either student sensitization or habituation. On the one hand, students pay too much attention to our comments, correcting only what they want and little more. Students thus don't learn to think for themselves. On the other hand, with an embarrassment of continual criticism, students may after a while become numb to our suggestions. We know that inexperienced revisors respond well to explicit cues about amplification and corrections. Experienced revisors need and want fewer implicit cues; rather, they need options, suggestions, and alternatives.[4] Most of all, we must remember that while modest grading may be realistic and educationally sound, the total absence of remarks may inflate students' view of their writing capabilities.

■ Background

Research has shown that hours spent drafting commentary simply do not pay off in improved results.[5] Intense teacher corrections do not seem to help students correct errors. Didactic remediation makes correcting particularly without hope. Further, the more acute the needed revision, the more resistant the student.

Moreover, research suggests that criteria that raters think are most important may not always be the criteria that most influence them.[6] Readers apparently prefer more weight given to content and organization but are strongly influenced by errors in mechanics, usage, and sentence structure, and so tend to lower grades even when content and organization are good. Another study showed that readers tend to be influenced by content, organization, and fluency or length,[7] not by error. While poor writers are not likely to suffer for errors, readers have been shown to use errors to penalize better writers.[8]

Other research suggests that there is also a discrepancy between instructors' principles and practices. It indicates that when marking essays instructors reward length and development, engaging writing, a personal voice, and control over surface features. At the same time, essay readers also tend to rate more highly essays that are abstract, impersonal, and elevated in language (pseudo-academic prose). Students are sometimes given contradictory messages. Instructors' comments are vague (like "tighten up") and lack priority, but ask students to be concrete and specific. In early drafts teachers correct surface features but tell students to develop meaning.

While research indicates no correlation between higher motivation and higher quality of performance, other research indicates that praise yielded longer papers and better attitudes. Studies also indicate that long comments produced a generally more effective piece of writing. But effective short comments could not be ruled out.[9] The single most glaring difficulty in testing writing is that even using sophisticated assignment development and careful scoring, the pre-post writing test design has yielded virtually no clear gain in scores over an academic year--much less over one semester as at Brockport. We may know that students are writing better but our measurement devices do not show it.[10]

More current scholarship indicates that most writing students read and make use of teachers' written comments on their drafts and find some types of comments more helpful than others. A survey of 142 college students regarding three variables of teacher response: focus, specificity, and mode, found that these students seemed equally interested in getting responses on global matters of content, purpose, and organization as on local matters of sentence structure, wording, and correctness, but students were wary of negative comments about ideas that they had already expressed in their text. While students did not like comments that sought to control their writing or that failed to provide helpful criticism, they most preferred comments that offered advice, employed open questions, or included explanations that guided revision. They expressed dislike of comments on word choice that they thought only reflected idiosyncratic teacher taste.[11]

The now-classic research[12] about instructors' evaluations indicated what students found least useful: comments

1. dealing with content (because they did not want to have their opinions evaluated); and
2. dealing with grammar and spelling problems; using vague language or mysterious symbols (!!?? diction, awk, sp, ||, ww, frag, p, Huh! etc.).

On the other hand, what students found useful were comments

1. telling them what was done correctly;
2. talking specifically to the details of the assignment, what was or was not addressed, giving examples, if possible;
3. making them aware of errors--distinguishing major errors from minor ones;
4. pointing out how errors are interrelated, so that poor organization could bring about poor paragraphs, etc;
5. that were factual;
6. that were clear, casting comments in terms that students understood; and
7. that were positive, encouraging, not sarcastic.

■ Assumptions

Evaluation is not mysterious. Students can and should know what is being evaluated and how it is done. Response to writing

1. attends to drafts as well as to final products;
2. is not limited to discrete skills;
3. is not simply an error hunt (i.e., a good paper is the absence of mistakes), with extensive corrections on surface features;
4. should reflect several dimensions of proficiency;
5. should employ direct rather than indirect measures of achievement such as multiple-choice tests to measure students' disciplinary writing;
6. should be balanced so that all major aspects of a course of study receive due worth;
7. should consider writing generated under a variety of conditions (e.g., in-class essays, field notes, take-home exams, etc.);
8. should have as its long-term purpose not simply to judge, but to enable writers to improve; and

9. should be undertaken by a variety of methods including the following:
    A. Responding on papers, focused feedback in marginal and summary notes;
    B. Instructor/student conferences;
    C. Group evaluation on an overhead, computer, and/or hard copy;
    D. Peer evaluation;
    E. Evaluative checklists, critiquing or editing guidelines;
    F. Large-scale scoring methods (analytic, holistic, primary trait);
    G. Portfolios or cumulative folders (not actually a method); and
    H. Surveys, questionnaires, and attitude scales (indirect measures).

The bottom line is that successful comments turn students back to their writing and lead them to make informed choices as writers. If we must boil response down to only one, we should ask ourselves: What can I say that can be most useful for students' next drafts?

TAXONOMIES OF RESPONSES[13]

■ For Basic Writers[14]

1. **Specificity**: the use of detail, the absence of vulnerable generalizations
2. **Organization**: the statement of a thesis and evidence of a sense of direction
3. **Expression**: fluency, variety, and diction
4. **Correctness**: special attention to five major errors (fragments, run-on sentences/comma splices, subject-verb agreement, pronoun-antecedent agreement, and verb forms)

■ Responses Keyed to Thinking Skills (see also Chapter 5)

1. Knowledge	content
2. Thinking skills	organization, development, use of evidence, logic,
3. Rhetorical skills	purpose, audience, style, diction, form, tone
4. Grammar skills	sentence-level correctness, usage, etc.
5. Mechanical skills	spelling, punctuation, capitalization, etc.
6. Attitude	motivation, interest

■ Response Types[15]

1. **Personal growth**: comments that cultivate ego strength
2. **Functional**: responses that are purposive and say: This is right; That is wrong. Fix it.
3. **Structural**: comments that concentrate on the amount of evidence, form, syntax, organization, other static structures

4. **Rhetorical**: responses to stylistic concerns
5. **Dialogic**: comments that help individuals probe content, developing intellectually richer material (not necessarily to develop the writing so much as to develop the writer cognitively). We actually engage the ideas that students are trying to state and so engage in a debate that encourages the elaboration or clarification of those ideas. We want to leave writers with one major problem to solve in revision. What do we need to say to writers to keep them writing, to give them a sense of its possibilities--that there is something worth writing about?

SAMPLE RESPONSES TO STUDENT WRITING[16]

To help us answer the question, "What can I say about a paper like this?" here is some language:

Definitions of General Evaluative Terms

1. An **effective** paper is eloquent, vivid, and emphatic in providing a convincing, arresting account.
2. A **concise** paper tells the maximum amount in the minimum of words. Its simple, straight-to-the-point style captures the essential ideas efficiently.
3. A paper is **cohesive** when clear transitions are provided between ideas and sentences. It successfully juxtaposes topics.
4. A report is **well developed** when main ideas are thoroughly elaborated and explained.
5. A **consistently** written piece has unity of content and form, mood, style, and ideas.
6. A **focused** composition has a construction that presents one thesis with sufficient elaboration related to it.
7. A paper is tightly **organized** when it provides a well-ordered, logical, coherent sequence of paragraphs reflecting a clear thesis.
8. An **original** treatment of topic is imaginative and inspired, providing a fresh perspective.
9. An **appealing** paper is enjoyable to read. It evokes a certain atmosphere and engages the senses and emotions.

General, Encouraging Remarks

1. You've got the right idea. Now it needs refining.
2. This needs work, but it has promise.
3. Although its lines of logic are somewhat shaky, your paper is emotionally effective and intriguing.
4. Your purpose is clear.
5. This is too short but so vivid that it seems a success.

6. You have chosen a stimulating topic and thesis and selected your examples judiciously.
7. You have made significant/considerable/impressive improvements in clarity, etc.
8. This paper would be useful reading for anyone concerned with X.
9. Your description of X is clear and evocative. I like the way you draw a conclusion from your experience /your reading of Y. The writing flows smoothly, and I relive the experience through it.
10. Your writing brought this [theory/approach] to life.
11. Well written! Your ending is just right. And the body of the paper demonstrates what you argue in the conclusion.
12. Extremely well written. I like the evidence of your mind at work here.
13. I like the way you organized this. Your comparison is detailed and clear.
14. Your self-knowledge gives this paper its strength. The details are precise and seem to be selected to provide an effective impression of X. Everyone has felt this way at one time or another and so you connect with your audience.
15. This paper is thoughtful and well organized. You announce the areas you will talk about, then examine X, and last compare it to Y. Well done!
16. Well organized. You spell out the differences meaningfully.

■ Development

1. You have made many improvements by adding evidence to support your argument.
2. More testimony from authorities would fortify your essay. You might want to look at X.
3. I enjoyed your essay. You could expand the idea of urban sprawl by using the X as one example.
4. There is insufficient information. I don't understand. Please tell me more about your topic. What else do you know about it? What is relevant? How can you find out more about it?
5. There is too much information in the piece. Is all this information relevant to the issue? What parts don't you need?
6. General statements must be supported by sufficient specifics to clarify or substantiate them.
7. Be more specific. I can't see "people" as well as I can see college freshmen, Easterners, New Yorkers, or preschoolers.
8. Your work is weak on evidence supporting your thesis.
9. Why are you just assuming? You should investigate.
10. Where are the statistics that would show the cost/frequency/value of a comparable item?
11. Did you attempt to find out? Did you look for a primary source to interview?
12. Paragraphing problems make it difficult to know which topic you are analyzing.
13. Some good sentences and detail, but the paper needs more effective transitions between paragraphs and within them.
14. A fine thesis statement but the personal narrative overwhelms the opening section. Could this part be condensed? For me, the real merits of the paper pick up in paragraph X!

15. Readers have to read too much between the lines. You need to do the work to make your point evident to them. Unpack your idea.
16. You apparently are just **beginning** to understand what this really means by the end of the paper. The thought process needs to be extended further or tailored and then moved up.
17. You describe your experience with X effectively. But you fail to address the **causes** of the problem.
18. Your work is good, but your thesis is too general to provide manageable support. You may need to bite off a little less of the topic (not clothes, but, say, skirts) in order to do so.
19. The quality is uneven. Powerful writing is weakened by inaccuracies/misreading of the texts/language that tends to offend even readers who agree with you.

■ Thinking

1. Reread the question. Are you sure you understood the assignment?
2. You have explored a lot of pertinent ideas. I wonder if the chain of events you suggest is inevitable. Are the steps as certain as you suggest?
3. On revision, please try to get straight in your mind:
    A. What it is that you need to report here?
    B. How you can relate some meaningful/useful data for us to consider?
    C. Look at the first sentences in paragraph X. How logical is this line of thought?
4. The comparison remains vague on many points that a well-thought-out approach would need to be specific and clear about. Data/examples might help.
5. This is written authoritatively and reads smoothly; however, a few gaps in reasoning leave some questions unanswered.
6. I got mixed up in the middle. Please revise for clarity.
7. Most of this is obvious. There is little here beyond surface thought and platitudes.
8. How does that description demonstrate the prejudices of the X organization?
9. The topic is not addressed until paragraph X. The introduction is too long for the rest of the paper.

■ Thesis

1. This piece lists events but has no thesis. What is the point you are trying to put across?
2. This piece doesn't seem to have much point to it, or perhaps it tries to do too many things at once. The reason for using these ideas isn't entirely obvious.
3. Apparently you weren't able to come to a definite conclusion or make a general statement based on that example. Work on this aspect when you revise.
4. A clearer thesis sentence is needed at the beginning, but your conclusion is effective.
5. You have drifted from your purpose. See your thesis on page X.
6. Please create and underline a topic sentence for each paragraph of this paper. Place them in the opening paragraph.

■ Conciseness

1. I think that you, like the rest of us at times, tend to use too many words to say something. Check to see if you repeat things unnecessarily? Could you be more concise?
2. Your paper could--and should--have been shorter.
3. There is too much extraneous and distracting material.
4. You need to trim your writing and limit your ideas.

■ Organization: Structure and Technique

1. This is a definite improvement. Your focus is now spelled out, and your descriptions are vivid and concrete, instructive, illuminating, and so on.
2. Very well organized for maximum interest and clarity. I like your control of the topic/your understanding of the theory that it reveals.
3. What pattern of organization did you have in mind for this paper?
4. Too many small paragraphs; it suggests that your ideas are underdeveloped. Or group related ideas into paragraphs, if they are minor points.
5. Your purpose is clear; the only problems remaining have to do with focus. The introductory/closing section delays the real story.
6. The piece is confused, unfocused, covers too many events, ideas, and so on. Do you have more than one theme here? Try using **WIRMTSI**: **W**hat **I** **R**eally **M**ean **T**o **S**ay **I**s . . . .
7. This section needs to be condensed so that readers can focus on the main point of the piece.
8. You have many excellent ideas, but you need to get them sorted out so that they come through clearly. A plan or outline might help. Please make one before you hand in your next version.
9. How did you plan to structure this paper? What did you see as the purpose of each part? How many parts did you plan to have?
10. Your organization seems off here. How did you arrange your facts? Might there be a better way? Try reversing or replacing data. You may have to adjust your thesis to match.

■ Language, Tone

1. Would you use this language in a business conference?
2. The language tends to alienate even readers who agree with you.
3. What would your readers' likely reaction be to this material? How might it be modified to dispel doubt, avoid confrontation, and so on.

■ Opening, Background, Ending

1. This paper needs a lead into the situation, so that readers who have not been in it can understand it.
2. You need to deal with X statistics in a way that would help your readers interpret them.
3. Do not assume your readers have X article in front of them. You need to tell us what the (moral/economic) question is.
4. The introduction is standard; it could become more compelling by adding X.
5. The opening holds readers at arm's length. Does your opening bring your reader right into the piece? Where does your piece really begin? Can you delete/move other information and begin there instead?
6. The conclusion is either too sudden or drags on and on. What do you want your readers to know, do, or feel by the end of your piece? Does this conclusion do it? Where does your piece **really** end?

■ Audience

In two-level assignment situations, you can identify which role a response comes from:

1. I can read your handwriting, but this employer would expect a typed letter.
2. Your grammar problems aren't serious enough to faze your imaginary audience, but they really annoy me since you presumably never bothered to fix them in high school.
3. We use these terms in class, but would your audience know them?
4. I don't understand, so I can't tell if your readers would.

■ Summary of a Source

1. This section provides a perceptive analysis of X's methods, logic, and use of statistics.
2. The analysis of X's chapter seems to contain more of your opinions than readers expect in an analysis of another person's writings. It is, however, an effective statement of your reaction to X's position. The two opinions should be kept clearly separated--or you may be suspected of plagiarism.
3. You show a fine understanding of the material and express that understanding well.
4. You get at only a little of what X is doing. X doesn't just list ideas; X tells why and how. You need to include the idea of Y to get at X's point.
5. I felt lost in this section almost all the time, since you do not explain/show what X says before you comment on it. The purpose of each of X 's sections is confused.
6. The organization is hard to follow. Which are the opinions of X? Which are yours? You need to make a clear reference--with documentation--to the person you are quoting.

Documentation

1. Your citation list must include page numbers, except for dictionaries and encyclopedias.
2. Full details are needed about your sources.

Plagiarism

1. Most of this sounds like a book. Can you find your own way to express this?
2. It is hard to separate your voice from the voice of your sources, but you must try.
3. Heavy reliance on source material--which is poorly integrated into your text.
4. I do not hear you talk like that. I want to hear your voice on the matter, not X's.
5. I do not hear your own voice. Do you really say those words? How might you say this in your natural language? What can you write to so your reader can hear you?
6. You need to distinguish between your ideas and those of X. You don't want to cross over into plagiarism.

Form, Mechanics

1. Your ideas are excellent, but you should proofread carefully for [sentence fragments]. Either join them to another sentence or give them the subject and/or verb that they need.
2. This paper deserves tighter editing/proofreading, especially for grammar/punctuation/spelling.

Procedural Matters (late papers, attitude, etc.)

1. I can't accept essays late because once the time I've set aside for reading them is past, I don't have that time anymore.
2. You did not get your revision of paper X in to me on time, so I don't have anything to report to you about it.
3. Your first versions made me very uneasy, so it will take some strong papers to earn a passing grade. Please take the course seriously.
4. Your grade at the moment is X, but that could swing in your favor if you put serious effort into your last paper and get me decent revisions on time. It's up to you.
5. Please see me outside of class so that we can establish what is expected of you on the assignments. You are doing a lot of work. But it is not meeting course requirements because you are not following the proper procedures.

Tips for Faculty: Responding[17]

We need to ask ourselves:

1. Do we address the content of the paper--single out what is good thinking and writing? Do we offer ways to improve content where it is weak?
2. Are our editing marks well-chosen, clear, and constructive? Do we classify editing problems into categories, not just point to mistakes? Does the editing offer students a reference for their corrections? Is some priority established, with the most serious problems emphasized?
3. Is the evaluation fair--so that there is consistency of instruction regarding responding and grading? Consonant with course/departmental standards? Do students know what the grading criteria are? Are suggestions for improvement made constructively?
4. Do our responses recognize students' prior work and general goals for the course?

Tips for Faculty: Grading[18]

1. Instead of an intimidating red pen, try a pencil, a green pen (for Go) or another calm color like blue.
2. Write small and neatly. Use polite circles, lines, arrows to point out problems or standard English errors, or to clarify relationships. Protect the integrity of the hard copy.
3. Start with checks early on or comments without grades.
4. Foresee difficulties and preteach from overheads or duplicated materials.
5. Don't edit or "fix" students' papers; we are assuming the student's responsibility. We are not copy editors. Ask students to check their dictionary or handbook. If our goal is for students to take a more active role in revising, return control over revision choices to students by measuring their intention with the actual effects of the rewrite.
6. Be sure students are aware of grading criteria. Set them to fit assignments ahead of time. Then evaluate papers in terms of the criteria you articulated.
7. All suggestions should have a hierarchy of importance. Our focus becomes students' focus. In general, give ideas more weight than mechanics. Comments on papers should reflect that priority. Distinguish minor from major errors and concentrate on one or two main points. First drafts should concentrate on content, comprehensiveness, complexity, clarity, and accuracy. After content, look at organization and style. However, between the middle and final drafts, mechanics should be brought into line.
8. Some of our responses are insincere, rubber stamped. Other comments are lies. Our comments should be real and to the point, pertinent but not pat. Deal with local elements in the margins. At the end, sum up good and weak points. Begin closing remarks with global comments about what students did well in general. (If we are using a portfolio approach, we should look at several papers in the portfolio to identify patterns.) Save comments on surface features until the end. We should try to make at least one genuinely positive comment.

9. Use the evaluation of one assignment to set individual and realistic goals for the next.
10. Give students time to revise and improve their grades. Allow for individual differences in revising. Drafts are to be messed up, cut up, written on, and tinkered with. Furthermore, not all drafts are to be messed up by others. (Use cover-sheets, numbered keys, keyed comments or simple underlining, or comment in pencil.) Grade not only on product but on process (the amount of improvement over the revising process). Try rewarding for substantive revision[19]:

	Quality of Revision	Final Draft	Total Grade
Naturalistic Observation	2%	8%	10%
Definitions	2%	8%	10%
Controlled Research	5%	10%	15%
Professional Statement	5%	15%	20%
Term Paper	10%	15%	25%
Total			80%*

*the remaining 20% for participation, etc.

11. Try a Rogerian response. We can read not to evaluate but to seek information. Read not to correct but to respond to what students have tried to say. Be facilitative rather than judgmental. Do describe, not prescribe. Try to *make suggestions* (You might try...) instead of giving commands in the margins. Use constructive comments such as *mirroring ideas* (You really find theatre reviews boring. I guess you....); *sharing your own experiences* (I had problems with my IRS form too); *asking questions* (I wonder if...; I'd like to know more about...; What did the others do? Did you read about the oil embargo? Can you think of another way to say this? Can you draft a stronger statement?). Describe what is happening in a paper and how it interferes with what is understood or what students are trying to say. Encourage self-assessment: What were you trying to do with this?
12. Try not to impose your writing style.
13. Try not to penalize risk taking.
14. Avoid censure, scolding. WHAT NO THESIS? STILL FRAGMENTS!
15. Avoid symbols that are off-putting (e.g., awk, R.O., run on, sp, ||) and so have fallen from grace--unless we also hand out a key sheet (and few students have time to or interest in meditating over a key sheet).
16. Avoid taking negative models from current classes, especially without advanced permission.

17. Return papers ASAP.
18. Show our own work.
19. Model both writing and revising behaviors.
20. Have students evaluate one of our papers.
21. Don't separate the dancer from the dance, that is, do not give one grade for content and another for form, the what and the how. We do students a disservice by grading their work on content only. It helps to tell students that writing counts, even when they are not in an English course.
22. Simple averaging penalizes students for early work. Instead, we might grade students' skill as it is at the time of evaluating, not as it was months ago. Try a weighted average, that is, one based more heavily on the last third of the semester.
23. How to avoid "whadjaget?" Once in a while, record grades for papers but do not put grades on them. Instead, students get a checksheet that records strengths and weaknesses and/or comments.
24. To deflect attention away from grades and onto substantive issues, students can request a grade *or* comments on papers, depending on how they feel about each assignment and how much time they have (see also How to Handle the Paper Load, p. 352).

    Those choosing comments are required to demonstrate that they have reconsidered the work returned to them. In this case, their grades do not change, since in editing the paper, we have become, in a way, its co-author. The reward for doing extra work lies in the fact that they are increasing the chances of their learning to write better--and this improvement should be reflected in subsequent essays.

    Students wanting grades receive no comments and cannot revise. But they do not escape being taught because they are still exposed to class discussion and analysis. Curiosity usually gets the better of even hardened nonwriters, and they ask for comments when they are ready to listen to them. This system improves class morale. Students eager to improve their writing feel that they are receiving the attention they deserve. The students who are only in the course because it is required feel they are getting off easy since they are not forced to revise. Asking students to confront the extent of their own involvement in the course makes them that much more responsible for their own education.[20]
25. Refuse to accept or grade paper that has not been edited. Call it a draft and assign a revision.

■ Samples of Faculty Responses to Student Essays

Letters and Sciences

Biology: Using Animals in Laboratory Testing[21]

A response:
In the beginning of your paper, you do a good job of summarizing the viewpoints that scientists and anti-

vivisectionists have on animal experimentation. The topic is complex because both groups make some legitimate claims.

A challenge:
On what basis do you reject the anti-vivisectionist view and accept the scientists' perspective? Can you imagine a situation in which it would not be ethically sound or scientifically valid to conduct experiments on animals? Can you identify the assumptions of any of the experts you refer to? What might be the particular biases of a religion teacher, a scientist, or a member of the animal rights coalition? Do you have biases concerning this topic?

Political Science Terrorism: Protecting US Embassies and Diplomats: World Hunger

A response:
You evaluate the experts' proposals well. By analyzing each solution's strengths and weaknesses, you persuasively argue for a combination of increased security and improved intelligence. Furthermore, although you decide against using military retaliation, you consider an opinion in favor of this solution and seem to understand the reasoning behind it.

A challenge:
As you draft your essay on US responses to world hunger, try to analyze your new subject as you have on the topic of terrorism, weighing the strengths and weaknesses of different proposals. What have been the successes and failures of US attempts to abate world hunger? What are the political, social, and economic contexts from which the different programs have emerged? After evaluating past attempts to curb hunger, see if you can make any recommendations.

Political Science: The New York State Judicial System[22]

A response:
This introduction contains many points that have the clear potential to stimulate as well as educate the reader. The suggested mismatch, for example, between New York State's social diversity and the composition of its course is a provocative topic. In fact, it is the perfect justification for your analysis of the merits of the appointment and election of judges.

As it currently stands, however, the introduction contains serious writing and organizational problems that undermine its substantive potential.

First, the main thesis is not apparent. Perhaps you intended the first sentence to be the main thesis; if so, it is not clear what point you are advancing. In fact, there are so many points and issues not logically connected to each other that I am hard pressed to know whether there is a main thrust. You need to decide what is most important for readers to know about the New York judicial system. Focus on that and eliminate what is extraneous.

Second, the writing is not fluid. The too frequently pretentious (e.g., societal variegation) or inappropriate (e.g., obscure debate) word choices interrupt the flow. Transitions to help the reader move from point to point are either absent or forced.
A challenge:
An introduction has three main purposes: First, to set out clearly the main and subsidiary theses of the paper/chapter; second, to justify them sufficiently so that the reader is lured to continue; third, to state the order in which the analysis will be developed. This introduction suggests that you have ample ability to dissect detailed and complex material. But it needs major revision, with special attention to writing and organization, so that its main themes are clear and convincing.

Professions

Economics: News Article Project

The assignment:
Each student submits a written commentary based on the articles chosen from the list below, analyzing trends and developments in the subject. The articles must be clipped from the newspaper and attached in a notebook to be handed in with the commentary.

The project will be graded on the depth and clarity of the analysis and the thoroughness of coverage. Avoid duplication in the articles and avoid summaries of them.

Suggested subjects:

Federal Reserve System
International Monetary Fund
Exchange Rates
Inflation
Money Markets
Commercial Banking
Financial Intermediaries
Treasury Debt Management
Balance of Payments

A response:
You have explored a lot of ideas, and they are all pertinent. I wonder if the chain of events you suggest is inevitable (e.g., 3rd sent.). The four categories you talk about (Federal monetary policy, effect of bank failures, effects of deficits, summary of other recent events) need to be expanded. Are the steps as certain as you suggest? Cut out the marginally relevant ideas and develop one.

LARGE-SCALE WRITING ASSESSMENT

Assessment is generally considered a large-scale process or set of activities by which information is gathered so that an evaluation can be made. The term *assessment*, in common currency, is suitable for the whole endeavor of conducting various evaluations, and making judgments and evaluation and assessment are sometimes used interchangeably. External assessments often involve formal and commercial standardized tests. The Educational Testing Service (ETS), American Colleges Test (ACT), and National Assessment of Educational Progress (NAEP) produce large-scale assessment tests as in the Advanced Placement (AP), Scholastic Aptitude Test (SAT), Test of Standard Written English (TSWE), Graduate Management Admissions Test (GMAT), and Medical College Admissions Test (MCAT) and pay particular attention to norms, validity, and use. Although at Brockport we do not have a procedure for undertaking campus-wide writing assessment, we can learn from those organizations and universities that do.

■ Definitions

1. **Formative evaluation** occurs while an activity or course of study is in process.
2. **Summative evaluation** occurs at the end of an activity or course of study.

3. **Norms** are the published scores and other data (e.g., standard error of measurement) derived from standardized testing of a representative sample from the entire domain of an appropriate population.
4. **Local norms** are the scores particular to the group being tested. Instructors generating evaluative measures have obviously more control in designing the instrument.
5. **Reliability** is the dependability of an instrument to measure something.
6. **Validity** refers to the ability of the instrument to measure what it claims to measure.
7. A **rubric** is a scoring guide. It is a series of numbers from highest to lowest with a corresponding level of writing competency. Each number signifies a particular score. Rubrics may be prepared with an assignment or before a writing assignment is given.
8. **Anchor papers** are papers that represent a given score.
9. **Range finders** or **Benchmarks** are prototypical papers at several levels of competence based on the anchor papers identified by test developers and trained readers.
10. **Prompts** refer to all the wording of the actual writing task or assignment.

■ Procedures, Purposes, and Assumptions of Large-Scale Assessment[23]

Procedure	Purpose	Assumption
Scoring Guideline	to recognize features of writing quality	writing quality may be defined and determined
Rater Training	to foster agreement on independent rater scores	one set of features of student writing on which raters agree
Scores on Papers	to fix the extent of writing quality for comparing writing ability and making decisions based on that ability	student ability to write can be coded and communicated numerically
Interrater Reliability	to calculate the degree of agreement between independent raters	consistency and standardization can be maintained across time and location
Validity	to determine if the assessment does measure what it purports to	an assessment's value is limited to distinct goals and properties of the instrument itself.

Three major types of large-scale scoring approaches are institutionalized across the country: Analytical, General Impression (Holistic and Primary Trait), and Portfolio approaches (this is not a scoring method, per se, but a method of collection).

■ Analytical Scoring

Analytical scoring (sometimes called criterion-referenced scoring) is a trait-by-trait analysis of features important to a piece of written discourse in any context. Points are assigned to each feature that reflects the possible range of achievement from poor to excellent. (In this case the parts of a paper are judged holistically, not the whole of the paper.) The most familiar is Diederich's[24] scale whose features include:

1. ideas
2. organization
3. wording (choice and arrangement)
4. flavor (style, interest, sincerity)
5. usage
6. punctuation
7. spelling
8. handwriting

The first four subskills receive extra weight because of their importance to the success of the paper.

Diederich Scale

1-Poor 2-Weak 3-Average 4-Good 5-Excellent

Quality and development of ideas	1 2 3 4 5		
Organization, relevance, movement	1 2 3 4 5	_____x5= __	Subtotal
Style, flavor, individuality	1 2 3 4 5		
Wording and phrasing	1 2 3 4 5	_____x3= __	Subtotal
Grammar, sentence structure	1 2 3 4 5		
Punctuation	1 2 3 4 5	_____x1= __	Subtotal
Spelling	1 2 3 4 5		
Manuscript form, legibility	1 2 3 4 5	Total Grade__%	

Variations in scales abound: Another atomistic scale rates papers from 1-6 on each of six subskills: topic development, organization, details, sentences, wording, and mechanics. Still another model includes: central idea and analysis (quality and depth); supporting material (quality and quantity); organization (introduction, paragraph development, coherence, unity, conclusion); literacy (grammar, mechanics); expression (style, tone, sentence variety, word choice); style: voice/diction level (cliches, jargon, idioms); disciplinary conventions; sexist language; and stress or emphasis (first, last, subordination).

Here is a variation of the analytic scale devised by graduate student Karen Renner:

Analytic Scale

Student	**Revision Work (50)**	**Paper Grade (100)**	**Final Grade (150)**

Ideas: 25%	1 2 3 4 5 x 4 =___
Details: 25%	1 2 3 4 5 x 5 =___
Organization: 20%	1 2 3 4 5 x 3 =___
Sentences: 15%	1 2 3 4 5 x 2 =___
Mechanics: 15% (Grammar, Spelling, Punctuation Document Format)	1 2 3 4 5 x 1 =___

Dichotomous (Forced-Choice) Scale for Evaluating Writing[25]

	Yes	No	
Substance	___ ___ ___ ___	___ ___ ___ ___	1. Paper addresses the issue. 2. Paper has a focus, central idea. 3. Paper develops major aspects of the central idea. 4. Paper shows awareness of importance of main ideas.
Evidence	___ ___ ___	___ ___ ___	5. Statements are accurate. 6. Opinions are adequately supported. 7. Sources are identified and documented appropriately
Organization	___ ___ ___ ___	___ ___ ___ ___	8. Structure or pattern of the paper is clear. 9. Paper has an introduction, development, and conclusion. 10. Paragraphs are coherent. 11. Transitions from one idea to next idea are logical.
Mechanics	___ ___ ___	___ ___ ___	12. Paper shows control over grammar. 13. Paper shows control over syntax. 14. Paper has few misspellings

Alternative Evaluation Form[26]

Student Name____________________

Assignment # 1 2 3 4 5 6 7

Type____________________

Rhetorical Considerations
1. Topic E G S W U
2. Focus/Purpose E G S W U
3. Contents/Logic E G S W U
4. Organization E G S W U
5. ____________ E G S W U

Mechanical Errors
1. Sentence Fragments 1 2 3 4 5
2. Fused Sentences 1 2 3 4 5
3. Comma Splices 1 2 3 4 5
4. Spelling 1 2 3 4 5
5. Pronoun Agreement 1 2 3 4 5
6. ____________ 1 2 3 4 5
7. ____________ 1 2 3 4 5
8. ____________ 1 2 3 4 5

Comments

Recommendations
- Keep up the good work
- Put in more time/effort
- See me for extra help
- Seek extra help from the Writing Lab

Date____________________

Course____________________

Instructor______________

Revision Due__________

Keys

Rhetorical Features
E: Excellent
G: Good
S: Satisfactory
W: Weak, Poor
U: Unsatisfactory

Mechanical Features
1. Minor error (but look it up anyway)
2. Annoying error (may affect grade in future)
3. Interfering error (grade lowered part of level)
4. Persistent error (grade lowered one level)
5. Fatal error (results in failing grade)

Grade

A: Outstanding paper
B: Above-average paper
C: Satisfactory paper
D: Barely acceptable paper
E: Unacceptable paper

Grade ______

Editing and Proofreading Checklist

Name: ____________________________ Semester: _____
Course: __________________________ Section: _____

Check = Weakness
Asterisk = Improvement
Use Improvement column to summarize improvement over course

1a = Assignment #1, first draft
1b = Assignment #1, final draft
2a = Assignment #2, first draft
2b = Assignment #2, final draft

Problem	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	Improvement
Spelling overall Rule words Carelessness											
Commas overall To separate To enclose Conventional											
Sentence fragment											
Comma splice											
Run-on sentences											
Subject/Verb agreement											
Verb tense											
Verb endings											
Pronoun referents											
Coordination											
Subordination											

■ General Impression Scoring

General Impression scoring consists of two major types: **Holistic scoring**, which was originated by the Educational Testing Service (ETS), and **Primary trait scoring**, which was developed by Lloyd-Jones for the National Assessment of Educational Progress (NAEP).

Whereas some methods for scoring essays assign several scores to a single piece of writing (e.g., analytic scoring), general impression scoring is predicated on the idea that the whole of a piece of writing is greater than the sum of its parts. Instructors may have difficulty giving verbal descriptions of good writing, but they can recognize good writing when they see it. This type of

scoring is based on the assumption that the various factors involved in writing are so closely interrelated that an essay should be assigned a single score based on the quality of the writing as a whole.

Holistic Scoring

Holistic Scoring is based on readers' overall impressions of the effectiveness of a piece of writing. Unlike criterion-referenced measures in which all papers could theoretically earn the highest score or the lowest, these impressions are rated against a scoring guide that provides a numerical scale of 4, 6, or 9 points to insure adequate variance.

Two patterns emerge for generating the scale and accompanying rubric. Standards may be set before the actual reading by highly trained readers. A rubric is established and then verified with sample papers some of which become anchor papers. Anchor papers are models in a ranked series for a particular genre from which the scale and rubric are then constructed. The remaining samples are called range finders or benchmark papers, which are used as examples of papers representing each level of quality. In the other common approach, papers are judged not against an ideal but against standards set by actual papers. Experienced readers read and rank order them to identify the anchor papers. The scale enables instructors to take anchor papers and match students' papers to them. In either case, the scoring guide consists of a numerical rating which is accompanied by a description of the features that characterize the essays receiving that rating.

The scoring guides are thus developed inductively and are descriptive rather than prescriptive. Judgment is also intuitive. Readers describe in general terms the characteristics of papers at different points on the scale, regardless of the topic written on. An initial set of papers is used to establish the range of abilities demonstrated by the population. After papers representing the full range of ability are selected, readers assign the top score to the best of the papers and lowest to the weakest paper. Everything else falls in between.[27]

During the actual assessment the trained readers continue to calibrate the quality of each test essay to the scoring guide and range finders with periodic checks against the anchor papers to minimize drift in ratings. The papers are typically read in a minute or two by each of two raters and the scores are summed. Discrepancies are generally reconciled by a tie breaker, one person who is held back to be a third reader. Holistic scoring is sometimes translated into letter grades, but this may be inappropriate because holistic scoring shows only variability within groups.

At the City University of New York (CUNY), for example, their holistic scoring is intended to distinguish a minimum degree of writing competence at the freshmen level. A rating of 4 indicates that a student has met the CUNY writing standard, and more than a point difference between ratings requires the third reader. For another, the New Jersey assessment uses a similar scoring approach but considers a two-point spread sufficient to call in a third reader. Writing samples of University of Michigan students are evaluated holistically. Students are then assigned to three skill levels: remedial, college, or exempt status. The freshman composition waiver policy at SUNY Brockport stipulates a similar, three-placement-level of eligible students' essays through a general impression scoring procedure.

Large-Scale Holistic Scoring

1. All papers are read on same assignment.
2. They are rank ordered from best to worst and given a ranking number
3. Readers do not know the scores given by other readers.

4. Papers given consistently the same score become the prototypes or anchor papers for each score.
5. In training, these papers are then discussed as to agreement on their scores.
6. Several practice scorings of other papers are completed to iron out discrepancies.
7. These 4, 5, or 9 groups of papers become the prototypical papers for the second stage, the training of readers.
8. Groups of readers are given a duplicated set of five papers so that each table group (of 6 or 7) does a common reading.
9. Papers are ranked again.
10. The head announces the scores previously given those papers by the last leaders. They are given another set of papers and the process is repeated until norms emerge.
11. Readers are expected to internalize the scale.
12. The actual papers are generally judged against not the ideal but what standards are set. Every so often actual rangefinders or benchmark papers are tested against the anchor papers.
13. Throughout the subsequent scoring there are periodic discussions to insure reliability.

Small-Scale Holistic Scoring

One way to make writing criteria coherent within a department is for members to develop local norms of writing for their majors.

1. We collect one set of writings from our upper division majors.
2. With the assignment prompt in hand, we classify papers into high, low, and satisfactory levels.
3. We decide why we chose what we did.
4. We exchange with a peer.
5. We repeat the process.
6. We compare notes.
7. We come to consensus, split the difference, or call in a tie breaker.
8. Given this exercise, we list what constitutes a strong, satisfactory, weak piece of writing. For example, for a Grade of A, students must satisfy what % of competencies; for Grade B what % of competencies; for Grade C, etc.

Tips for Faculty: Evaluating Papers Holistically

1. Read quickly; score immediately.
2. Don't reread.
3. Read the entire paper.
4. Read for what has been done well, not poorly.

5. Take everything into account (organization, spelling, style).
6. Try to ignore poor handwriting.
7. Do not penalize a well-developed but unfinished essay.
8. Do not judge a paper by its length. Neither short nor long necessarily equals good.
9. Remember that any paper that attempts to respond to the topic--however tangentially--must be judged according to the logic of the argument developed by the writer.

Samples of Holistic Scoring Guides

GMAT Holistic Scoring Guide.[28] Papers will show some or all of the following characteristics:

Upper-half papers make clear a definite purpose, pursued with varying degrees of effectiveness. They also have a structure that shows evidence of some deliberate planning. The writer's control of English usage ranges from fairly reliable at 4 to confident and accomplished at 6.

Papers scored as a **6** tend to offer sophisticated ideas within an organizational framework that is clear and appropriate for the topic. The supporting statements are particularly effective because of their substance, specificity, or illustrative quality. The writing is vivid and precise, though it may contain an occasional flaw.

Papers scored as a **5** are clearly organized with effective support for each of the writer's major points. The writing offers substantive ideas, though the paper may lack the flair or grace of a 6 paper. The surface features are consistently under control, despite an occasional lapse in usage.

Papers scored as a **4** show evidence of the writer's organizational plan. Support, though sufficient, tends to be less extensive or convincing than that found in papers scored as a 5 or 6. The writer generally observes the conventions of accepted English usage. Some errors are usually present, but they are not severe enough to interfere significantly with the writer's main purpose.

Lower-half papers either fail to convey a purpose sufficiently or lack one entirely. Consequently, their structure ranges from rudimentary at 3, to random at 2, to absent at 1. Control of the conventions of English usage tends to follow this same gradient.

Papers scored as a **3** usually show some evidence of planning or development. However, the organization is often limited to a simple listing or haphazard recitation of ideas about the topic, leaving an impression of insufficiency. The 3 papers often demonstrate repeated weaknesses in accepted English usage and are generally ineffective in accomplishing the writer's purpose.

Papers scored as a **2** are characterized by a lack of development or inadequate support for ideas. The level of thought apparent in the writing is frequently unsophisticated or superficial, often marked by a listing of unsupported generalizations. Instead of suggesting a clear purpose, these papers often present conflicting purposes. Errors in accepted English usage may seriously interfere with the overall effectiveness of these papers.

Papers scored as a **1** leave the impression that the writer has not only not accomplished a purpose, but has not made any purpose apparent. The dominant feature of these papers is the lack of control. The writer stumbles both in conveying a clear plan for the paper and in expressing ideas according to the conventions of accepted English usage.

The zero **(0)** score is reserved for papers which are blank, illegible, or written on a topic other than the one assigned.

Scoring Guide for the SAT II: Writing Test[29]

General Directions for Scoring: Scores given to papers range from six down to one. Readers should reward what has been done well. Scores should reflect the range in excellence in the papers that have been written on the topic. The range finders and sample papers provide examples of responses at the various score levels and guide your understanding of both the diversity and limits of the range at each score level.

Because each topic places unique demands on student writers, readers should score papers primarily in reference to the standards that emerge from the sample papers. There are, however, some broad categories that define the score ranges no matter what topic has been administered and no matter how broad or narrow the range of skills of those responding. These categories are listed below. Readers' interpretation of terms such as "competence," "effectively," and "well developed" in the descriptions below should be significantly influenced by the sample papers on the topic being scored.

Score of 6
A paper in this category demonstrates *clear and consistent competence* though it may have occasional errors. Such a paper

- effectively and insightfully addresses the writing task;
- is well organized and fully developed, using clearly appropriate examples to support ideas; and
- displays consistent facility in the use of language, demonstrating variety in sentence structure and range of vocabulary.

Score of 5
A paper in this category demonstrates *reasonably consistent competence* though it will have occasional errors or lapses in quality. Such a paper

- effectively addresses the writing task;
- is generally well organized and adequately developed, using appropriate examples to support ideas; and
- displays facility in the use of language, demonstrating some syntactic variety and range of vocabulary.

Score of 4
A paper in this category demonstrates *adequate competence* with occasional errors and lapses in quality. Such a paper

- addresses the writing task;
- is organized and somewhat developed, using examples to support ideas;
- displays adequate but inconsistent facility in the use of language, presenting some errors in grammar or diction; and
- presents minimal sentence variety.

Score of 3
A paper in this category demonstrates *developing competence*. Such a paper may contain one or more of the following weaknesses:

- adequate organization or development
- inappropriate or insufficient details to support ideas
- an accumulation of errors in grammar, diction, or sentence structure

Score of 2
A paper in this category demonstrates *some incompetence*. Such a paper is flawed by one or more of the following weaknesses:

- poor organization
- thin development
- little or inappropriate detail to support ideas
- frequent errors in grammar, diction, and sentence structure

Score of 1
A paper in this category demonstrates *incompetence*. Such a paper is seriously flawed by one or more of the following weaknesses:

- very poor organization
- very thin development
- usage and syntactical errors so severe that meaning is somewhat obscured

Essays that appear to be off topic or that pose unusual challenges in handwriting or other areas should be given to the Table or Group Leader.

GMAT Scoring Guide: Analysis of an Argument[30]

6 Outstanding A *6* paper presents a cogent, well-articulated critique of the argument and demonstrates mastery of the elements of effective writing. A typical paper in this category

- clearly identifies important features of the argument and analyzes them insightfully;
- develops ideas cogently, organizes them logically, and connects them with clear transitions;
- effectively supports the main points of the critique;
- demonstrates control of language, including diction and syntactic variety; and
- demonstrates facility with the conventions of standard written English but may have minor flaws.

5 Strong A *5* paper presents a well-developed critique of the argument and demonstrates good control of the elements of effective writing. A typical paper in this category

- clearly identifies important features of the argument and analyzes them in a generally thoughtful way;
- develops ideas clearly, organizes them logically, and connects them with appropriate transitions;
- sensibly supports the main points of the critique;
- demonstrates control of language, including diction and syntactic variety; and
- demonstrates facility with the conventions of standard written English but may have occasional flaws.

4 Adequate A *4* paper presents a competent critique of the argument and demonstrates adequate control of the elements of writing. A typical paper in this category

- identifies and analyzes important features of the argument;
- develops and organizes ideas satisfactorily but may not connect them with transitions;
- supports the main points of the critique;
- demonstrates sufficient control of language to convey ideas with reasonable clarity; and
- generally follows the conventions of standard written English but may have flaws.

3 Limited A *3* paper demonstrates some competence in analytical writing skills and in its control of the elements of writing but is plainly flawed. A typical paper in this category exhibits *one or more* of the following characteristics:

- does not identify or analyze most of the important features of the argument, although some analysis of the argument is present
- devotes most of its time to analyzing tangential or irrelevant issues
- is limited in the logical development and organization of ideas
- offers support of little relevance and value for points of the critique
- does not convey meaning clearly
- contains occasional major errors or frequent minor errors in grammar, usage, and mechanics

2 Seriously Flawed A *2* paper demonstrates serious weaknesses in analytical writing skills. A typical paper in this category exhibits one *or* more of the following characteristics:

- does not present a critique based on logical analysis, but may instead present the writer's own views on the subject
- does not develop ideas or is disorganized
- provides little, if any, relevant or reasonable support
- has serious and frequent problems in the use of language and in sentence structure
- contains numerous errors in grammar, usage, and mechanics that interfere with meaning

1 Fundamentally Deficient A *1* paper demonstrates fundamental deficiencies in analytical writing skills. A typical paper in this category exhibits *more than one* of the following characteristics:

- provides little evidence of the ability to understand and analyze the argument
- provides little evidence of the ability to develop an organized response
- has severe and persistent errors in language and sentence structure
- contains a pervasive pattern of errors in grammar, usage, and mechanics that results in incoherence

0: Illegible, off-topic, in a foreign language, or merely copies the topic
NR: Blank or nonverbal

Topic Number: Notes for Readers' Interpretation (see the corresponding prompt on pp. 285-286)

A successful response need not comment on any one of the points listed below and may well raise other points not mentioned here. Some of the features of the argument that invite comment or questioning are:

- What caused the layoffs at Alpha? Is there a significant change in the market for the products that both Alpha and Beta make, so that neither Alpha nor Beta can expect their operations to continue to be very profitable? If so, Beta probably does not need additional workers.
- Whether the employees who are being laid off or encouraged to retire from Alpha are necessarily more skilled or more suitable than other people whom Beta might hire or than the employees that Beta already has.
- Whether the 15% who were laid off were the least able Alpha employees.
- Whether Alpha's methods are similar enough to justify hiring them without having to retrain, or different enough so that inside information about them is worth hiring their former employees to get, or whether the employees are at liberty to/are willing to divulge such information.
- Whether Alpha's methods are so different that their employees would actually require a great deal of training to work at Beta.
- Whether Beta already has a sufficient number of employees or even too many employees.
- What has really caused the decline in profits at Beta. Is it a question of the kind and number of employees, or is it some other factor that Beta should pay attention to and spend its money on?

- Whether Beta is actually less profitable than Alpha or has seen a more rapid decline in profits, as the argument seems to assume.
- How significant are the similarities between Beta and Alpha? Hence, how comparable are the businesses' or the employees' products?
- Whether the employees will be particularly motivated to compete against Alpha, since they may be disillusioned with the industry in general, and may just wish that they were doing something else altogether.
- Whether Alpha is necessarily the most significant competitor, or whether Beta should be paying attention to some other, newer, or even more successful competitor.

A successful response will probably not spend much time on tangential issues, such as whether Alpha made the right decision or treated the employees properly, what companies are really looking for in workers, what Beta should do (apart from the course of action proposed here) to improve its performance, etc.

Points to Emphasize about the Papers

The test assesses "analytical writing," as well as the ability to reason, marshal evidence to develop a position, and communicate complex ideas.

Acknowledge the limitations of time; candidates had only 30 minutes to draft and revise. Therefore, we judge these papers as first drafts, not expecting "perfect" papers, even at the top score level.

Score holistically for overall quality of thinking and writing, as described in the scoring guide. Don't focus on minor errors or a single weakness. Three examples are not necessarily better than one; what matters is how well-chosen the examples are and how well they are discussed.

GMAT candidates are applying to schools of graduate management. They have not necessarily had business courses, although some writers will undoubtedly use bullet formats. Bullets are acceptable so long as they are used effectively, e.g., to highlight a few key points.

GMAT candidates come from many different cultures and therefore use many variations of international English. We should read for clarity and coherence, not for fine points of American grammar or style. However, we should not overlook serious errors of any kind, including ESL features, that affect the quality of writing or interfere with meaning. Readers should practice scoring ESL papers during the training sessions.

There is no single "right" answer; very different papers can get the same scores. For the Argument task, however, there are clearly "wrong" answers since a critique can be well-written but fail to critique the argument.

Read supportively, but do not supply meaning if the meaning is not there. Acknowledge the difference between meaning that is "clearly implied" and meaning that the reader has to supply in order for the response to make sense.
Use not only the scoring guide but also the six benchmark papers to help you anchor your judgments. You may need to refer to that set of materials fairly frequently as you score the first batch and thereafter only for the occasional paper.

Award the highest score that the scoring guide allows. The scoring guide is a continuum, and some papers will appear to fall just on the line between two scores. If you can justify the score above the line, give the higher score.

When trying to decide if a response is on or off topic, be as fair-minded as possible. Remember that the topic of a response can be either stated or implied. We anticipate very few off-topic papers. If you have any doubt whatsoever, consult with the Chief Reader. (see procedures for giving O's.)

Notes for Readers

Format: Writers may use rhetorical questions, numbered statements, the bullet format, etc., to introduce or summarize points in outline form or to list parallel, self-contained examples that do not require development or logical linking (e.g., writers may use bullets as they would commas in a conventional sentence to separate items in a list). Writers *should not* use these formats so as to avoid developing key points, organizing them logically, or linking them with appropriate transitions.

Exhaustiveness: Even outstanding responses need not address every feature of an argument--i.e., a thorough and perceptive analysis of the main features of an argument should not be penalized for disregarding some relatively minor or peripheral features. Responses should, however, probably be penalized for addressing only one of several important features; such papers are not likely to be given scores above "4" and may be scored lower. Multiplication of examples all supporting the same point should not excuse a failure to address other important features of the argument.

Weighing of Criteria: In the Analysis of an Argument, critical reasoning skills should weigh more heavily in the scoring than should typical criteria for judging writing proficiency, such as command of the language or matters of format. For example, a response that presents an adequate analysis of an argument but uses the bullet format and displays some ESL or dialect features could still be scored a "4"; a response that is more smoothly written and conventionally framed but that does not adequately treat most of the important features of the argument should probably be scored a "3," provided that some analysis is present. *Even a well-written paper should be scored a "2" if the writer does not offer a critique based on logical analysis but merely* presents his or her own views on the subject. In other words, the writing characteristics described at a given score point *qualify* a paper for receiving that score but are not alone sufficient to justify awarding it; the paper must exhibit the critical-thinking characteristics associated with the score point. Readers accustomed to emphasizing "use of language" and other writing proficiency criteria need to remember that the Analysis of an Argument task is intended primarily to assess critical thinking ability in a constructed-response mode [see Analysis of Arguments in Appendix Part 2], not the ability to produce a conventional draft essay.

Variety of Approaches: In a globally administered examination, cultural differences will produce a variety of rhetorical approaches to the task of analyzing and evaluating an argument. United States candidates may be more likely to begin by declaring--sometimes quite emphatically--that the argument is riddled with flaws; candidates from other cultures, especially in the Eastern hemisphere, may be more likely to begin by making respectful or supporting remarks about the argument before proceeding to analyze it. Such less direct approaches should not be seen as signs of less developed analytical abilities. Readers should score according to the analysis that the writer provides in the paper as a whole.

GMAT Scoring Guide: Analysis of an Issue

6 Outstanding A *6* paper presents a cogent, well-articulated analysis of the complexities of the issue and demonstrates mastery of the elements of effective writing. A typical paper in this category

- explores ideas and develops a position on the issue with insightful reasons and/or persuasive examples;
- is clearly well organized;

- demonstrates superior control of language, including diction and syntactic variety; and
- demonstrates superior facility with the conventions (grammar, usage, and mechanics) of standard written English but may have minor flaws.

5 Strong A *5* paper presents a well-developed analysis of the complexities of the issue and demonstrates strong control of the elements of effective writing. A typical paper in this category

- develops a position on the issue with well-chosen reasons and/or examples;
- is generally well organized;
- demonstrates clear control of language, including diction and syntactic variety; and
- demonstrates facility with the conventions of standard written English but may have minor flaws.

4 Adequate A *4* paper presents a competent analysis of the issue and demonstrates adequate control of the elements of writing. A typical paper in this category

- develops a position on the issue with relevant reasons and/or examples;
- is adequately organized;
- demonstrates adequate control of language, including diction and syntax, but may lack syntactic variety; and
- displays control of the conventions of standard written English but may have some flaws.

3 Limited A *3* paper demonstrates some competence in its analysis of the issue and in its control of the elements of writing but is clearly flawed. A typical paper in this category exhibits *one or more* of the following characteristics:

- is vague or limited in developing a position on the issue
- is poorly organized
- is weak in the use of relevant reasons, or examples
- uses language imprecisely and/or lacks sentence variety
- contains occasional major errors or frequent minor errors in grammar, usage, and mechanics

2 Seriously Flawed A *2* paper demonstrates serious weaknesses in analytical writing skills. A typical paper in this category exhibits *one or more* of the following characteristics:

- is unclear or seriously limited in presenting or developing a position on the issue
- is disorganized
- provides few, if any, relevant reasons or examples
- has serious and frequent problems in the use of language and sentence structure
- contains numerous errors in grammar, usage, or mechanics that interfere with meaning

1 Fundamentally Deficient A *1* paper demonstrates fundamental deficiencies in analytical writing skills. A typical paper in this category exhibits *one or more* of the following characteristics:

- provides little evidence of the ability to develop or organize a coherent response to the topic
- has severe and persistent errors in language and sentence structure
- contains a pervasive pattern of errors in grammar, usage, and mechanics that severely interferes with meaning

0: Illegible, off-topic, or merely restates the topic
NR: Blank or non-verbal

Proposed Rubric for Distinguishing Writing Proficiency at the Lower and Upper Division at Brockport [31]

Students are waived from ENL 112 on the basis of an achievement of three or above on the Advanced Placement English exam taken in high school. Eligible to waive ENL 112 via exam are also students whose SAT verbal score is above 550, TSWE score is above 50, ACT score is above 25, English Regents score and high school average is above 85, and/or high school performance in related subjects confirms strong verbal skills. In addition, students may be waived from ENL 112 on the basis of successful completion of an equivalent college course or a special program (e.g., Syracuse's Project Advance). The composition office contacts these students during the first semester that they are enrolled at Brockport to make arrangements for the exam. The students therefore do not register for ENL 112 until the waiver exam is taken and evaluated. The waiver exam itself is similar to the exam administered at the end of ENL 112. By that time ENL 112 students are expected to write coherent and convincing arguments.

Below are three levels of specification of criteria: brief, moderate, and fully expanded:

1. **Brief Rubric**. The features determining writing proficiency at the lower division level are: fluency, complexity of discourse, detail, arrangement, and correctness.
2. **Moderately Specified Rubric**
   A. **Waived: Outstanding**. This means superior work; a clearly stated thesis; mature ideas that account for the complexity of the issue; impressive use of support; skilled organization; a recognizable personal style/polished diction; free of mechanical errors.
   B. **Highly Competent: Recommend** ENL 305. This means above-average work; a clearly stated thesis; adequate development; organization apparent and sound; minimal mechanical flaws.
   C. **Competent**: **Require** ENL 112. This means average work; thesis is stated, but student is unable to deal with the subtleties of the issue; inadequate development; minimal mechanical errors.
   D. **Inadequate**: **Require** ENL 102. This means below average work; thesis is misconstrued or absent; ideas are undeveloped; student is unable to deal with complexities of the issue; extensive mechanical errors; short.
3. **Fully Elaborated and Adjusted for Transfers and Rising Juniors** (see following page)

Proposed Rubric for Distinguishing Writing Proficiency at Brockport: Fully Elaborated and Adjusted for Transfers and Rising Juniors

	Waived from Lower-Division Writing	**(Recommended) Upper-Division Writing**	**(Required) College Composition**	**(Required) Fundamentals of College Composition**
Focus/Thesis	Takes firm position; recasts thesis in own language	Clear sense of thesis which may be cast in own language	Clear sense of thesis but uses language of the prompt	Fails to convey a purpose or misconstrues purpose; repeats prompt for thesis; may have conflicting theses
Rhetorical Mode or Purpose (e.g., argument)	Shows clear sense of argument/ counter argument as dominant pattern; demonstrates sound reasoning	Demonstrates an understanding of the purpose or appropriate genre; sustains reasoning	Demonstrates an understanding of the purpose or appropriate mode; fails to sustain reasoning or address counter arguments	Observations are merely associative or consist of primitive listing; reasoning is flawed; evidence irrelevant or simplistic
Development	Expresses rhetorical relationships effectively and sustains through examples and details; grapples with sophisticated ideas	Evidence is substantive and specific but not abundant	Unsupported generalizations predominate (uses few details or examples); introduces a point but cannot sustain support throughout piece	Unsupported summary statements or generalizations predominate; ideas remain inchoate or are repeated; few or no details
Organization	Clear, logical, and artful; connectives are appropriate and varied; achieves effective closure	Clearly organized, with effective support for each point; connectives apparent and appropriate; occasional lapses in coherence; achieves closure	Demonstrates basic understanding of essay organization, with some confusion in coherence and order; correct use of connectives uneven; may rush to conclusion	Logical sense of structure is rudimentary or almost entirely absent; illogical or no sequence; random structure; rambles; incoherent
Style/Tone	Uses a natural, personal voice; has a rhetorical style--grace, flair, rhythm; has language choices to draw from; demonstrates command of vocabulary/idioms	Uses a natural, personal voice; good grasp of vocabulary/ idioms	Mundane, perfunctory, vacuous	Personal style is not discernible; language is appropriated from prompt or resembles empty academic prose
Fluency (length)	Varies but adequate	Varies but adequate	Varies but generally adequate	Short
Correctness	Technically accurate; shows mastery of surface features	Consistently under control; an occasional lapse	A few minor mechanical errors	Displays an array of surface features; errors tend to interfere with reader comprehension

Primary Trait Scoring (PTS)[32]

Primary Trait Scoring is a criterion-referenced scoring method that focuses on specific rhetorical features or traits of a given piece of writing. It was masterminded by Lloyd-Jones for the National Assessment of Educational Progress in the 1970s. Richard Lloyd-Jones used the classic Communication Triangle to derive primary rhetorical traits and the particular verbal devices that should be associated with the rhetorical trait. The Communications Triangle consists of three vertices. Expressive discourse, as writer oriented, is primarily concerned with the voice of writers. Persuasive discourse, as audience oriented, would be concerned with classical rhetoric, specifically, the appeals of ethos and pathos. Explanatory discourse is subject oriented and thus concerned with the logical appeals. In reality, the sharp categories of the model blur into continua.

The thinking behind this general impression method is that rhetorical situations differ both with audience and purpose. The personal essay differs from the book review which differs from the research proposal which differs from the medical record. This scoring method describes the primary traits of a particular type of discourse (e.g., descriptive, explanatory, persuasive, or even more disciplinary-specific genres) and trains readers to render holistic judgments according to the ***unique*** features of that form. Once these features are set up, a forced choice or yes-no response is used.

When papers are scored for their primary trait, they are not ranked against one another but against external criteria.[33] Raters must decide the purpose, audience, the rhetorical strategies most likely to accomplish writers' specific purposes, what qualities make for successful response. To set up scoring procedures, a rubric for several levels of quality is generated. The rubric is a description of that trait found in papers at different score levels after raters have read a large sample of the work and reached agreement on them.

When a writing task is created, certain rhetorical strategies are identified and cued in the prompt itself.[34] The method involves isolating one or two of the most important writing skills. Next, several levels of proficiency (usually 4, 6, or 8) are articulated. Whether a task is created first or a writing skill is identified first, instructors rate each paper against criteria spelled out in a scoring guide. For example, if the task requires a description then the primary rhetorical trait is typically sensory. Readers would expect to find emphasized the language of sight, touch, hearing, and so on. In an expressive account of an experience, secondary traits measured concern details about people in the scene and integrating expressions of feeling. In a manufacturing report, each process is laid out step by step and readers would evaluate the accuracy of that process.

A fully elaborated primary trait scoring design consists of a rationale that states exactly what the task seeks to test, the prompt itself, a description of the task's unique rhetorical traits, how the writing task is related to those primary rhetorical traits, and a description of how particular words and features of the instructions cue the desired response.[35] It also consists of anchor papers representing each score point and a justification for each score.[36] If placement were an objective of the assessment, scores keyed to placement levels would be integral to the design.

For example, expressive writing should demonstrate the ability to reveal feelings indirectly or directly, to role play imaginatively, to use figurative language. Persuasive writing should demonstrate the ability to create a credible voice, to establish logical proof, and to refute an argument. Expository writing should demonstrate the ability to explain a phenomenon, trace a sequence, analyze an experimental design, etc.

How Primary Trait Scoring is Done

1. One set of writing is collected on the particular subject.
2. With assignment in hand, we classify papers into high, medium, and low.
3. We decide why we chose what we did.
4. We exchange papers with a colleague and the process is repeated.
5. The group draws up criteria that is assignment-specific, answering what constitutes a superior, a satisfactory, a weak piece of writing--given this task.
6. We apply the scale to future writing tasks.

PTS Scoring Guides

General
4-Very good performance
3-Solid performance
2-Marginal evidence of skill
1-No evidence of skill

Expository Writing
4-Elaborated example present
3-Elaborated example present but unclear
2-Elaborated example present but unclear and subjective
1-Elaborated example present but unclear, subjective, and irrelevant

Persuasive Writing
4-Position taken
3-Position taken but not clearly stated
2-Position taken but not proper terms used
1-Position not taken or taken but on wrong issue

Persuasion by Letter
4 to 1-The ability to create a credible voice
4 to 1-The ability to motivate to action
4 to 1-The ability to establish logical proof
4 to 1-The ability to refute an argument

Elaborated Primary Trait Scoring Guides

Persuasion[17]

An expository essay with persuasion as the primary trait may be rated on a 4-point scale as follows:

4 Paper: The writer takes a strong stand either pro or con and defends it with solid evidence. The arguments are logical and seemingly founded on facts or on real experience. Tone and word choice are appropriate. The paper exhibits rhetorical excellence through exceptional vocabulary, highly sophisticated sentence structure, or a particularly well-constructed argument. The writer seems very aware of audience. The strength of a 4 paper may lie in its style or in its logic; either way, it can truly be labeled "persuasive."

3 Paper: The writer's viewpoint is clear, but supporting evidence may be less effectively presented than in a 4 paper. A 3 paper exhibits no major flaws, that is, the tone and wording are appropriate to the subject and audience. However, the paper is less rhetorically effective than a 4. It will often have some identifiable weaknesses, perhaps in word choice, style, completeness, or organization, but will not be weak in many areas or seriously weak in any. Overall, a 3 paper merits consideration but is generally not thought provoking or moving.

2 Paper: A 2 paper overall lacks the power to persuade. The reader can usually determine the writer's viewpoint, but it may not be clearly expressed. The supporting evidence offered is weak, irrelevant, or incomplete. It may be difficult to perceive any real awareness of audience; tone or word choice seems at times inappropriate. Some 2 papers may be little more than an outpouring of emotion, with little or no effort to persuade the reader logically or stylistically.

1 Paper: Unlike a 2 paper, a 1 paper may be virtually incomprehensible or may exhibit no effort to persuade the reader. It is generally difficult to determine the writer's point of view; there is no clear expression of opinion, or whatever statement is offered is ambiguous. Usually, there is no supporting evidence in a 1 paper, or what is offered is too limited or poorly expressed to be valuable. Like a 2 paper, a 1 paper may be little more than an outpouring of emotion, but generally it will lack even the cogency evident at the 2 level. The 1 paper exhibits weaknesses in vocabulary, rhetoric, organization, logic, and word choice. In short, there are no redeeming persuasive factors.

0 Paper: A "zero" is a special category. It is not an indicator of quality (no paper is qualitatively below the 1 level). A zero is assigned to papers that are blank, totally illegible, written in a language other than English, or that address a completely different topic.

Persuasive Letter

Four levels of quality are identified as follows:

4 Paper: The paper goes beyond 3 in sensitivity to audience, in ingenuity of argument, amount of concrete detail and use of that detail in support of the argument. Such a letter would be likely to persuade.

3 Paper: The paper clearly adheres to appropriate conventions, demonstrates audience awareness, produces several arguments for a position and supports at least one of the arguments with concrete details. Such a letter is likely to be read sympathetically.

2 Paper: The paper shows knowledge of formal conventions and may produce one argument for a position, but the argument is undeveloped and unsupported with concrete details. This letter, also, would not persuade.

1 Paper: The paper does not produce any arguments for or against the relevant issue and/or does not adhere to the conventions of formal *letter* writing (e.g., form, grammar, spelling). Such a letter would not persuade anyone of anything.

■ Evaluating Scoring Approaches

The advantages of analytic scoring is that it is uniform and specific. The analytic score measures mastery of the subskills that are taught. However, by the same token, analytic scoring is considered arbitrary, for "it is by no means clear that these subskills are in fact real, distinct, or meaningful."[38] There is apparently no agreement as to what, if any, writing subskills exist, ranging from the mechanical (e.g., punctuation) to the profoundly cerebral (e.g., creativity) and how they may be defined or measured. In fact, few if any syntactic features have been isolated for predicting growth in writing ability.[39]

Within the single, pre-post essay model, analytic scoring has lost favor because a close examination of features is slow and thus costly and because the scoring process has proven no more reliable (.85+) than holistic methods.[40] In fact, the high correlation between the holistic scale and all categories of the analytic scale indicate that testers do not need to use the time consuming analytic scale.[41] Although other disadvantages are that analytic scoring does not lay out strategies for revision and is time-consuming, some claim that the extra time put into itemizing is offset by its curricular advantages.[42] Last, instructors scoring analytically may not agree on the weight of parts of an essay (spelling, grammar) but agree on rank overall, and thus nothing is materially gained in analytic grading beyond a usage score.

Of course, the alternative general impression scoring is not fail safe. And, it is a major undertaking. It is costly and can become a management headache. As we would expect, its reliabilities are lower than objective tests (which doesn't test writing directly) but higher than analytic scoring. The general impression system of rating essay quality may be equally imprecise--however fastidious assessment preparation is. Apart from the fact that holistic scoring yields little diagnostic information,[43] there always exists the potential lack of uniformity among criteria. Readers tend to agree on top and bottom papers, but there tends to be slippage in agreement in middle papers.[44] That reader judgment is influenced by syntactic complexity is inconclusive, but that word choice influences judgment is not. However, rater expectation may be as important as student text in scoring papers as may be the impulse to reach consensus in group scoring.[45] Therefore, holistic scoring also risks snap judgment.

Research also suggests that variations in the ways holistic raters are trained may have unintended effects on their ratings. Readers may also be influenced by the purposes of tests, for example, for placement or proficiency.[46] It is also interesting to note that a third rater's decision is guided by knowledge that he or she must break a tie.

Nonetheless, pre-post holistically scored essays are the single most popular and reasonable method of assessing writing on a large scale.[47] Holistic scoring operates on the assumption that a single score for a piece of writing means a single decision and such decisions can be made quickly and reliably enough to be practical.[48] In holistic scoring, judgments are anonymous, recorded by independent multiple readers. They are definite; there are no middle points. Raters are trained to look out for certain things, which irons out wide discrepancies. While training is lengthy and repetitive, general impression scoring ultimately speeds up evaluation because readers spend no more than one or two minutes on a paper. It is thus efficient, emphasizing what is right, not wrong.

Although the population to which holistic scores are calibrated may be considered "normal" and follow its regularities, rubrics are developed directly out of local test criteria that are embedded in the anchor papers and cued in the prompt. In other words, ranked against each other, the papers tend toward the normative but the scoring guide sets out criteria for writing quality at the local level. As such, all papers could conceivably get the highest or lowest scores, although in practice this is unlikely. At its best, holistic scoring combines criterion referencing (defining points on a scale that correspond to stipulated criteria)[49] and norm referencing (calibrating scores to local norms).

As a form of general impression scoring, primary trait scoring introduces a single number that represents the degree to which papers effectively demonstrate one or two critical traits for certain forms of discourse. When particular papers are scored for their primary trait, they are measured against external standards or criteria--not necessarily a bell or normal curve. Like holistic scoring, primary trait scoring does not support analytic reductionism. Both holistic and primary trait scoring provide for controlled reading and multiple independent judgments on how closely papers approximate a rubric. Both primary trait and holistic scoring require the training of readers and checks on ratings in progress. Both primary trait and holistic judgments are relatively simple. Both approaches appear to work as they are supposed to. Administration and record keeping are also similar. The most important advantage of primary trait over holistic scoring is that the primary trait method defines with greater precision and exclusiveness the criteria used in scoring particular genres.

Like the other general impression measures, PTS takes time. It is impersonal and may be overly narrow. That is, omitted or misused skills are ignored. PTS also lacks a correctness scale and so misses the opportunity to perform some sort of error analysis. On the other hand, the benefits of PTS is that the scale encourages detailed consideration of a particular writing task. It provides students with direction for revision. Once a scale is established, papers can be graded rapidly. And last, primary trait scoring serves as a guide for designing assignments (see Chapter 9).

PORTFOLIOS

Portfolio Evaluation

For over a decade, portfolio assessment has grown in currency as a means of establishing writing competency. The portfolio method is not a scoring approach per se but a way of collecting material to which a particular evaluation technique may then be applied. Evaluation may thus occur in combination of any of the scoring options discussed above. Several portfolio approaches are available.

1. **Samples of Work**. Students' completed portfolios may contain one or two papers repeatedly revised and submitted for final evaluation--and often sent on to a next instructor.
2. **Selected Work**. Portfolios may contain a range of written work that students and/or we pick for submission. Some material may be chosen for a mid-semester review after which material is revised for the end-of-semester submission.
3. **Passport Portfolios**. An effective use of the portfolio is to collect a variety of papers over a program of study in the major as a criterion for graduation or admission to a graduate or professional school.
4. **Longitudinal Portfolios**. Writing is collected over a period of one or more years to determine growth in writing skill, often used in school or district-wide assessment.

While each paper in a portfolio may be graded, recent approaches encourage portfolios to be evaluated as a whole, not paper by paper.

Tips For Faculty: Portfolios

1. Try not to score papers atomistically, that is, combing papers closely and marking errors line by line.
2. When evaluating a portfolio, strive for consistency between a portfolio and a final grade.
3. When in doubt about a portfolio, judge conservatively.
4. Pass or not pass may refer to individual writings or the portfolio as a whole. Make it clear to your students that it **is** or **is not** possible to pass the portfolio and fail a written assignment. Conversely, it **is** or **is not** possible for students to fail the portfolio and pass an essay or the course. But whatever our decision as to which system to use, we need to state it in our course overview.
5. When appropriate, cover sheets for each essay or for the entire portfolio are used (see Appendix Part 1).
6. We and/or our respective departments are encouraged to set departmental criteria. For example, faculty can read samples, placing them in high-medium-low groups, and

discuss what makes them that way. For example, for a grade of A, students must satisfy what % of competencies; for grade B, what % of competencies; for grade C; grade D, etc.

Sample Guidelines for Portfolio Evaluation for Brockport Freshmen[50]

The portfolio system gives you a chance to satisfy the college writing requirement on the basis of your best work, most of which you have had a chance to think about and revise. This means that you and your course instructor select several papers reflecting your writing skills on a variety of tasks. Because we are looking for your best work, we expect that at least three of your portfolio papers result from several drafts.

Also included may be an in-class unrevised piece evaluated by your instructor/your advisor. In order to get a C or higher in the course, your portfolio must pass. (Note that you are not guaranteed a C if your portfolio passes. Your grade may be pulled down by other factors such as poor attendance, poor participation, or missed deadlines.)

At mid-semester you go through a dry run with one or two papers. If your mid-term portfolio passes, these papers may simply be placed in your final portfolio as they stand (though you may revise if you or your instructor wishes.) If your portfolio does not pass, you may revise the papers further and resubmit them in the final portfolio, or you may replace them with other essays from your class-work. It is up to your instructor.

Each paper includes an informal but typed cover sheet that explains what you were trying to accomplish and describes part of your writing process, for example, what feedback you got and what changes you made when revising.

Because the department must be confident that the work you submit is really yours, it asks for an in-class piece of writing on which you've had no help. This is why your professors insist on seeing a lot of your in-class work and also successive drafts of your at-home writing. New pieces/topics that you haven't worked on earlier in the course will generally not be accepted.

Portfolios do not pass if they contain more than a very few mistakes in grammar, punctuation, spelling, or typing. Portfolios also do not pass if they have more than a few sentences that are so tangled that the meaning is unclear to readers. This level of correctness and clarity may be harder to achieve for some of you than for others, especially for those who have learned English as a second language. But you wouldn't be in college if we did not think you could achieve it.

Sample of Brockport's Portfolio Cover Sheet for Freshman Composition

Name: ______________________ **Course:**________ **Section** _____
Date: _____________ **Instructor:** ___________________

_____ Congratulations! Your portfolio passes.
_____ I'm sorry, but your portfolio does not pass because

your____________________ paper does not pass.
your____________________ paper does not pass.
your____________________ paper does not pass.

Reasons for Not Passing

Assignment					
#1	#2	#3	#4		
___	___	___	___	1.	The paper does not do what it is expected to do.
___	___	___	___	2.	The ideas or experiences are not developed enough; or there is not enough evidence to support your purpose.
___	___	___	___	3.	Problems in organization, structure, or paragraphing make the paper unclear or confusing.
___	___	___	___	4.	The paper lacks adequate transitions between sections, paragraphs, or sentences.
___	___	___	___	5.	Problems in wording and syntax make the writing unclear or confusing.
___	___	___	___	6.	The paper lacks an adequately limited thesis or controlling idea.
___	___	___	___	7.	There are too many mistakes in grammar, punctuation, and spelling.
___	___	___	___	8.	The essay is not long enough.

Comments: ____

■ Sample Disciplinary Writing Portfolios

Arts and Performance

Theater[51]

1. One production critiqued from an acting or production course
2. One play analysis from an acting or production course
3. One paper from Theater History, Modern Drama, or Introduction to Drama
4. One term paper from a 400-level theater course (Theater Seminar, Directing, Theater Management)

Communication: Argument and Debate[52]

Before their speeches, students prepare the following statements to be circulated and read:

1. A description of the specific audience that is going to be addressed
2. A statement as to how students presume to know that the audience will be either hostile or apathetic
3. A statement as to why specific supporting documentation was used, why the speech was organized in the manner selected, why the delivery pattern was chosen, etc.

Following the speech, the presenter should be prepared to defend his or her specific organizational pattern, the use of specific examples, illustrations, statistics, reasoning, etc. Presenters should be prepared to use their text and other readings to justify their choice of materials and strategies.

The Product: Looking at the Speech

1. The analysis of the case by the speaker. What were the choices of argument? Could better arguments be made in the case of this speaker?
2. The supporting materials in the speech itself used to promote the issues. Is the evidence biased? Is the testimony valuable? Do the examples support the hypothesis?

3. Was the presentation credible? Were the speakers able to convince the audience of their authenticity?
4. Were the speakers using the best methods of developing a reasonable and desirable response in the audience?
5. Was the speaker effective in all the "usual" delivery criteria?
6. Other

Looking at the Cross-Examination

1. Were the questions presented clearly and succinctly?
2. Were the questions the result of understanding the presentation? Did the questioner demonstrate a reasonable understanding of the topic under discussion?
3. Were the questions perceptive? Did the question seek to uncover the weakness of the argument presented by the speaker?
4. Did the questioner maintain control of the questioning period?
5. Was the cross-examination presented in a professional, non-hostile manner?
6. Was there a logical sequence to the questions? Did they attempt to reach some logical conclusion? Or, were they random and irritatingly pointless?
7. Other

Debate Evaluation Form

Code: 1=Where have you been? This is poor and needs reviving. 2= Weaker than it should be; work on improving. 3=Adequate and satisfactory. 4=Well above average. 5=Superior performance.

Name:____Date:__________________________
Resolution:____

Analysis of Topic: Affirmative: were the contentions well defined and clearly significant? Did the plan solve the problems stated and were the advantages clearly a result of the specific plan presented? Negative: Did they clash on the contentions presented by the Affirmative? Had the negative team anticipated the affirmative analysis and attacked it directly?

Organizational Skills: Organization of presentation, organization of evidence presented within the arguments, organization of attack on opponents, use of internal summaries and clear conclusions.

Evidence: Quantity? Quality? Sources clearly cited?

Reasoning: Did the debater draw inferences from the evidence that was presented? Or did she or he expect the audience to draw its own conclusions? Was the reasoning free of fallacies? If there were poor reasoning skills used by the opposition, were they pointed out by the debater?

Refutation: Reading a statement is not sufficient refutation. Were there attempts to clash head on with the opposition? To what degree of success? Were the clashes on major issues or on trivia?

Asking Questions in Cross-Examination: Were the questions well prepared, unambiguous, and calculated to elicit desired responses? Did the questioner maintain control of the questioning period? Was the questioner poised and self assured? Did the questioner commit the unpardonable error of using the questioning period for a mini-speech?

Answering Questions in Cross-Examination: Were the answers clear, direct and to the point? Did the respondent react appropriately to unclear, vague, or loaded questions? Did she or he maintain composure during the process?

Delivery: Was it a canned presentation? Did it sound read or was it appropriately extemporaneous based upon notes and responses to opposition arguments? Did she or he make it compelling?

Teamwork/Grasp of the Process: Was she or he a team player as demonstrated by helping and cooperating with the team's members, or was she or he allowing her or his partner(s) to dangle slowly in the wind? Did they avoid contradicting one another, and when errors occurred, provide support in correcting those errors later in the debate, etc.?

General Effectiveness: How was the speaker received by the audience? Did she or he present the image of a speaker who was confident, but not condescending? Did the audience perceive the person as knowledgeable on the subject? Did the speaker seem to truly support his or her position?

Total Points

(**Debate** one 75 possible--total points multiplied by 1.5)
(**Debate** two 100 possible--Total points multiplied by 2)
Other Comments:

Letters and Sciences

English[53]

1. Understanding of Literature and Literary Analysis. The paper demonstrates students' ability to

    - explicate texts without the aid of secondary sources;
    - interpret theme through systematic analysis;
    - recognize relationship between form and content;
    - take relevant historical, biographical, and/or social contexts into account in the interpretation of literary works;
    - understand, summarize, and synthesize critical arguments; and
    - evaluate various critical views.

2. Writing Competence

    Substance of the argument. The paper provides:
    - a significant thesis;
    - appropriate evidence;
    - sufficient evidence;
    - overall development of thesis; and
    - appropriate documentation.

    Structure. The analysis has:
    - an identifiable thesis;
    - a logical organization;

- transitions between and within paragraphs; and
- an effective sense of closure.

Style. The paper exhibits:

- an awareness of audience;
- appropriate voice;
- appropriate diction level;
- clarity of presentation; and
- conciseness.

Editing. Correctness is evident in:

- punctuation;
- grammar;
- standard usage;
- spelling; and
- typography.

Each major's portfolio is reviewed by full-time departmental staff. All papers must have received a grade and included in it the original markings and comments; the grading professor's signature is required. Papers are evaluated for the degree to which they demonstrate an understanding of literature and literary analysis and competence in drafting an argument. Each item in the two categories is evaluated as either satisfactory or unsatisfactory (forced choice). Papers must be accompanied by the assignment prompt.

Geology/Earth Science[54]

	Evaluation					
Criteria	SA*	A*	N*	D*	SD*	Cannot Assess
1. Records observations, data, analyses, or verbal information in a legible, concise, organized, and systematic manner						
2. Explains a recognized theory or concept						
3. Evidences an understanding and effectively summarizes several articles that relate to a particular topic or subject						
4. Contrasts differing opinions, arguments, or perspectives relative to a particular topic, hypothesis, or position						
5. Prepares an informative abstract based on #1						
6. Cites references and compiles a list of references using a style appropriate to the field						

7. Uses illustrations effectively (e.g., graphs, maps, tables, charts, etc.)						
8. Demonstrates a working knowledge of correct grammar						

*Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

Mathematics[55]

1. One paper with substantial mathematical content in the form of proofs of mathematical results
2. Examples illustrating mathematical concepts
3. Worked exercises based on mathematical results presented in class
4. Written in-class assignments

SAMPLE GRADING OR EVALUATION GRIDS[56]

(see Editing/Evaluation Forms in Appendix Part 1)

General Evaluative Grids

Name________________________________ Course______________

Weak	Fair	Good	Excellent	
___	___	___	___	Memory of course information
___	___	___	___	Understanding of central concepts; the ability to apply them
___	___	___	___	Ability to give reasons for opinions and interpretations
___	___	___	___	Writing skill
___	___	___	___	Effort

___Distinction of A

___Pass ___Fail

Alternate Grid

1. Content/research: richness of material
2. Insights, thinking/reasoning
3. A genuine revision: genuine changes, not just editing
4. Original thinking: having something of your own to say
5. Organization, structure: guiding the reader
6. Clear natural language: voice
7. Mechanics: spelling, grammar, punctuation, and proofreading

Evaluation Grid Keyed to Grades (for an application of General Impression Scoring, see p. 328+)

A ± Distinguished/outstanding work; polished diction; effective, skilled organization; mature idea convincingly developed; free of mechanical errors; impressive use of examples; etc.

B ± Highly competent. This means above-average work; clearly stated thesis, purpose, plan; adequate demonstration of thesis; minimum of basic, mechanical flaws.

C ± Competent. This means average work, grammatical errors kept under control; adequate organization and development.

D ± Fulfilled assignment but poorly developed and organized, and mechanically flawed.

E Unacceptable on all counts.

Evaluation Grid Keyed to Grades

Grades range from 4 to 0 and are based on form as well as content. A plus (+) or minus (-) sign may be added to the grade to achieve a more subtle assessment.

A **4±** paper shows originality of thought in stating and developing a central idea. Its ideas are clear, logical, and thought provoking; it exhibits the positive qualities of good writing: a) careful construction and organization of sentences, paragraphs, and the essay as a whole; b) careful choice of effective words and phrases; c) concentration on a main purpose, with adequate development and firm support; d) virtually no mechanical errors.

A **3±** paper has a clearly stated central purpose, logically and adequately developed. Its ideas are clear because it contains many of the qualities of good writing. It is comparatively free of errors in using English. Although indicating competence, the 3 paper lacks the excellence of thought and style that characterizes a 4 paper.

The **2±** paper has a reasonably clear central purpose that has received fairly adequate development. It is satisfactorily organized and avoids serious errors in English usage. It may have few correction marks on it, but it lacks the excellence of thought and expression that would entitle it to an above-average rating.

The **1±** paper indicates below-average achievement in expressing ideas correctly and effectively. It usually contains some serious errors in English usage and/or does not present a central idea with sufficient clarity and completeness. With more careful proofreading and fuller development, some 1 papers might be worth a 2 rating.

The **0** paper usually indicates failure to state and develop the main idea. It includes serious errors in grammar, spelling, and sentence structure. The following are some of the weaknesses that characterize 0 calibre writing: a) inadequate statement or development of main idea; b) inadequate or illogical paragraphing; c)faulty sentences; d) misspelled words; e) lack of subject-verb agreement; f) faulty use of tense; g) misplaced modifiers; h) lack of antecedent-pronoun agreement.

HOW TO HANDLE THE PAPER LOAD[57]

A common complaint about writing from disciplinary faculty is that even if they were trained to work some writing instruction into their course, their classes are too large, there is no time, and their first obligation is to their content. Furthermore, our memories are good. Perhaps in our own schooling we recall the harsh, meticulous red circles from our English teachers. And the joy we experienced in the absence of corrections on a page.

Marking papers is labor intensive and pretty much a thankless job. Most papers don't deserve word-for-word scrutiny. All students may want from us is a sign of recognition, not an autopsy. One colleague said an average paper should take no more than 15 minutes to read and comment on. More than that and we're killing ourselves and giving students more than they can handle anyway. It thus takes constant vigilance and courage not to correct every error, circle, underscore, X or check it--not because we are lazy but because it runs counter to contemporary writing pedagogy. We can adopt alternative techniques to allay our guilty conscience and remedy the problem of writing lengthy comments that go unread, much less acted on.

The purpose of this section is three-fold: to incorporate writing into the curriculum, to keep the paper load manageable, and to make students increasingly responsible for their own work. Were such a position on writing taken by the department or school as a whole, it would be easier on the conscience of both, and it would be more consistent for our students. (And were we to adopt this thinking, we should build them into our course overviews to alert students upfront as to the department's paper grading policies.)

Facing huge stacks of papers is intimidating. It takes work to change the habits of a professional lifetime. But it can be done. Here are some labor-saving devices for responding to writing (see also Ideas for Writing Informally in the Content Areas in Appendix Part 3):

1. Not every piece of writing is worthy of our attention or comment. Comment without grades. Grade without comment. Skim some, read others closely, ignore still others entirely.
2. Require short papers that need only brief comments. These papers may become part of a graduated sequence of assignments that builds on early skills toward a longer graded critical or research report later in the semester or in the course of study.
3. Collect notebooks or field notes at regular intervals (at mid- and end-of semester) and merely count pages for credit.
4. Evaluate assignments randomly. Students are required to do all assignments. However, we mark only a random number, say four of the seven assignments collected, but students are not told which ones. These papers could be submitted for grades at specific times during the semester. We might select students by birthdays, reverse alphabetical order, whatever.
5. All assignments would be graded but only a portion, say 50%, are commented on. Students wanting to talk about their work would resubmit it for discussion.
6. All assignments would be graded, but comments would only be made on those getting a C or below. Students wishing to find out why their grade was good, would also resubmit their papers for discussion.

7. Students decide between comments or a grade (see p. 321, #24 for complete rationale). Students feel they are following an option of their choice. Our morale improves, knowing that a number of our students will only get a grade.
8. Introduce the *Optional Revision* for those who want to improve their grades. Others satisfied with their grade would exempt themselves. For students only in the course because it is required thus feel they are getting off easily because they don't have to revise. Others taking the class seriously may resubmit.
9. Stress students' initiative in improving their own errors. Explaining grammatical errors, edit, say, a paragraph or a page thoroughly--not the whole paper. Put a double line to indicate where we stopped editing. Then students must take it from there. At that point, we can confine ourselves for the rest of the paper to reading for and responding only to content.
10. Focus evaluation on one to two major weaknesses. As in Primary Trait Scoring, set priorities for features to be evaluated, inform the students, and stick to those priorities.
11. Shift some of the burden of evaluating surface features to students. Put a small ***x*** or a ✓ on the line in which we find mechanical errors. Students must then find and correct them on each page.
12. Sit on our hands and read papers for content the first time without error at the top of our mind. A second reading goes much faster, and we may not notice nearly as many mistakes.
13. Professional writers throw away much of what they write. Why not students? After students have written drafts of several pieces, have them pick two or three assignments for revising and grading. Similar to a portfolio system, we can collect portfolios on a schedule or unannounced. Students are thus responsible for keeping their portfolio work up-to-date. We can then assess the whole body of work rather than each individual assignment.
14. Don't evaluate everything at home and in writing. Write "Conference" on the paper. Then it is up to students to schedule appointments and show up. More can be accomplished per unit of time by talking than by writing out comments.
15. Periodically, turn your course into a studio and have students work on their papers/reports when you are there to help them. Or hold mini-conferences during a lab or other relatively independent classroom session. Roger Garrison created the one minute conference in class, responding orally while others worked. Muriel Harris holds three, 10-minute conferences per regular class sessions.
16. Respond on computer or cassette, as anthropologist Chuck Edwards does.
17. Occasionally arrange for students to help each other. Divide responsibilities. Form groups in class to discuss particular problems (content, reasoning/arrangement, conciseness). Use peer groups or so-called experts on topics (facts, development, methodology), the writing (thesis, logic, organization, coherence), or the editorial skills (grammar).
18. Hand out editing guides with clear criteria. Given careful preparation, students exchange papers, peer edit, even assign a grade, and sign their name at the bottom. Peer group

comments may replace actual scoring. These comments enable writers to know what is good and what needs improving--without the threat/fear of our grade. Writers write for the writing, not for the grade.

19. Assign collaborative papers. I choose between two basic options: Three or four students work on one paper, and I assign one grade for each member of the same group. Or I split the grade between the group. For example, in a group of four with a joint grade of 85, the one working the hardest would get, say, 30, the next 25, the next 20, and the last 10.
20. Read all papers first and stack them into piles of low, average, and high. Then re-read and comment.
21. Read the good papers first, so as not to get depressed.
22. Save at least one or two good papers until the end as a treat when we are tired.
23. Pace ourselves. We shouldn't grade more than three hours at a time (or whatever our limit is).
24. *Last but not least*: Prepare a rationale for administrators who might question the fact that we no longer overcorrect. We should establish our writing philosophy early on; explain our approach, show examples, and put it in our course overviews. If possible, we can also maintain a file of professional articles on the subject. Get the department to promulgate this perspective.

CHAPTER 12
COLLABORATION, CONFERENCES, AND COMPUTERS

Writing is precisely like a kiss--you can't do it alone.
John Cheever

COLLABORATIVE WRITING OR THE WORKSHOP APPROACH

Collaborative learning is a teaching approach whereby students comment on each other's work-in-progress and offer suggestions for improvement and revision. Peer response and peer evaluation are two of the most widely used forms of collaborative learning, used not only by writing instructors but by faculty across the disciplines.

Collaborative learning makes students active, not passive, partners in the educational process. It helps decenter writers' frame of reference and overcome the sense of isolation they may feel when they write. The peer group approach to writing does not make collaboration a debating society; rather, it is a gathering of helpers. It should be a safe place. It can provide emotional and intellectual support from peers.[1] Collaborative learning generates immediate feedback. It asks for students to come up with the consensual answer, modeling a true dialectic.[2] And, instead of second guessing the instructor, cooperative learning[3] changes the teacher-student relationship. The focus now shifts to peers.

And so, this is also all about real audiences. It is a different matter for students to explain the work of their own to someone like us rather than to an uninitiated audience of peers, getting feedback from them, who serve as a reality check and expand students' views. The assumptions that underscore collaborative learning are these: Students share ideas, attitudes, backgrounds, and experiences with each other. They are likely to write more like other students than like us or other professionals. By working in groups, students get realistic practice in applying the conventions of good writing to peer thinking in their discipline.[4] A person never stands in quite the same relationship to the world after some peer group contact.[5] As a matter of fact, ask students to put a stamp on an envelope to mail the paper (to someone; for publication) and see what happens. We'd be surprised what the shift to a "real" audience makes in the writing.

In addition, collaborative or cooperative learning is more than just about improving the academic environment. While the academy does not teach team playing, in business and the professions personnel are expected to be team players. In this respect, collaborative learning involves students in deliberation, argumentation, and the negotiation of difference.

However, despite our ideals, group work is not for everyone. The return in effectiveness is not always worth the investment in time. There is a trade-off in dedicating class time for peer work. However, we can introduce a balance of lecture and discussion, in-class and out-of-class writing, individually and in groups. We may no longer be able to "cover everything," but what is learned in class is learned more actively, more thoroughly, and more independently.

■ Problems and Solutions

1. Peer group work is time consuming.
   Response: Workshop groups may meet out of class and submit evaluations of the group process confidentially to us.[6]

2. The blind are leading the blind.
   Response: Not necessarily. Students often come to class with reserves of academic learning that may be mobilized in the peer group setting. Students can pool that expertise and make it available to the group.

3. Some student groups get off track; the groups deteriorate into rambling bull sessions.
   Response: We can use explicit forms/editing sheets to chart constructive sessions, and we can collect them. Students can edit and sign the bottoms of the papers they edit.

4. Premature discussion of surface features often occurs.
   Response: We can make students responsible for certain information or tasks that go beyond mechanical correctness, like content or structural matters.

5. Some peer readers make superficial or useless comments (e.g.,That's nice. I like your paper. It's awful. Write it this way. That is spelled wrong.) to which student writers react with frustration.
   Response: Problems with collaborative learning in fact tend to stem from lack of guidance, lack of experience, and lack of commitment. In these cases, we should sit with the group, model appropriate behavior, and, if necessary, lower the boom.

■ Major Variables in Group Theory[7]

1. **Composition**: group member characteristics, group size, problem-solving skills, and creativity
2. **Structural**: the flexibility and effectiveness of the communication and attraction network, polarization, popularity, etc.
3. **Operating**: the roles enacted by instructors, leaders, scribes, allies, dissenters, and the deliberation procedures

4. **Task**: the nature and quality of the activity; the reason the group exists in the first place
5. **Outcome**: the finished products that satisfy the requirements of the task; the nature and quality of the reports made by the groups
6. **Group atmosphere**: the climate, social setting, and behavior of students during the execution of the task, including the instructor's behavior
7. **Environmental**: the physical space, materials, and equipment
8. **Time**: the amount of time allotted to train for collaborative learning, to participate in it, and to evaluate it (the first two over a few weeks)

■ Variables That Influence the Success of Groups[8]

1. Status of task
2. Extent of individual control over the material
3. Flexibility with pre-established forms
4. Process for responding to changes
5. Process for resolving disputes
6. Constraints, such as time, deadlines
7. Credit for work

■ Stages in Group Development

1. **Initial involvement**: formal vs. informal set of rules; tentative involvement
2. **Transition stage**: group internalizes rules; becomes more truthful
3. **Working stage**: group autonomy; group accepts task and directs efforts for undertaking it

■ Size and Evolution of Groups[9]

Group size generally ranges from four to six. Some instructors say that groups comprised of more than five tend to lose power.

1. **Large group/whole class**: An effective way to introduce the workshop approach is the fish-bowl technique. We model the activity in front of the whole class with students or as students ourselves. One student paper is duplicated, put on overhead, and read aloud. The whole class responds, learning to model constructive feedback and correction. Orientation for group work thus starts from the whole class, then works its way down into groups of four or six and finally into the heterogeneous triad, which some experts consider the most effective.
2. **Small groups**. Groups of three to five are formed. Students bring an early writing draft and copies to class. Within each group, each paper is read aloud. The group responds

orally, and the writer records feedback directly on the draft. All editors sign their comments.

3. **Pairs:** Papers are not duplicated. Writers read draft aloud with the peer looking on. Each individual pair discusses the paper. The editor underlines and comments directly on the paper. The editor signs the draft. (This is a particularly good model for inexperienced editors.)

Establishing Workshop Guidelines[10]

1. Early in the semester students are assigned groups to brainstorm how to use groups.
2. Each group makes a set of rules. (We suggest the problem areas: absenteeism, laziness, unpreparedness, imbalanced roles--dominating students, etc.).
3. Brainstormed rules are put forward to the class.
4. Adjustments are made. We eliminate redundancy and circulate the final form of guidelines.

Example of a Set of Student Guidelines[11]:

1. When we come to class we form small groups.
2. When working in small groups, we stay on the subject. We discuss personal matters outside of class.
3. Since not every one of us functions at their best levels at all times, we understand when a group member occasionally does not contribute equally.
4. If noncontribution persists, we recommend a teacher conference for the noncontributing member. Or we ask the person to leave the group. Or we ask to place the noncontributing member in a group of noncontributors.
5. Authority is divided among us equally. None of us bears total responsibility.
6. We reach group decisions through critical thinking, compromise, and the elimination of less important ideas.
7. We are prompt with preparations for group work, readings, and papers.
8. We monitor behavior in groups through constructive criticism.
9. When a group member is absent, he or she is responsible for calling a group member to make up the work.
10. Majority rules.

Types of Writing Groups

The bases for grouping may vary. They may be self-selected, random, homogeneous, or heterogeneous. They may remain the same throughout the semester or members can be rotated. They may be organized by disciplinary skills/strengths as follows:

1. **Pre-writing/research groups**. Students can be given specific tasks that generate the raw material for a paper. They complete a list of instructions. They trace a line of reasoning, outline a description. They debate an issue before writing an argument.
2. **Composing groups**. Students respond to zero level as well as revised drafts.
3. **Theme groups**. Students are grouped by their knowledge of particular subject areas or topics.
4. **Skill groups**. These groups are used to teach specific skills such as summarizing, documenting--based on common needs, abilities, interests, etc.
5. **Editing groups**. Students are grouped by stylistic or surface features that must be attended to. These may also be organized by disciplinary conventions. Papers are passed along through several such groups to bring essays to final form.

■ Instructor Monitoring

1. **Proximity monitoring**. We simply walk around.
2. **Observer monitoring**. A member of each group sits to one side and records the interaction.
3. **Teacher participation**. We join various groups.

■ Evaluating Group Process

1. The group is only as effective as its members. Some instructors evaluate group interaction informally. Other instructors ask each member of the group to evaluate another member, including him or herself. The scale may range from 1-10. The average for each category is 5. The following categories are starters:
   - A. Willingness to work with the group
   - B. Willingness to build consensus
   - C. Willingness to contribute new ideas
   - D. Ability to adapt to new ideas
   - E. Compliance with deadlines
2. One scoring approach is based on the premise that group members' grades get better if they help make the writer's essay better. Admittedly time consuming and complex, the procedure is sound, at least in principle. Group members and their instructor's grades are listed in the left two columns of the table below, with the writer for a particular cycle at the top. After the workshop, the writer confidentially ranks the contribution of each member, giving him or herself the highest score (because he or she contributed most for having thought about and written the piece) and submits this to the instructor.

To track the collaborative effort of individual students over a semester, we add the contribution scores for that student over several workshop sessions. Then we divide by the number of sessions. The result is an average contribution score over time for that peer group member.

To get a group contribution score, we perform the multiplication and addition as indicated. The total score, 148, is divided by 21 which results in a group score of 7.0. A chart like the one below could be prepared for each writer as his or her turn to read comes up.[12]

Students	Instructor Grade 1-10	Multiplied by	Score for Contribution ** (ranked by writer)	Total
Writer Susan	8	x	6*	48
Jay	8	x	5*	40
Mitch	9	x	4*	36
Karen	3	x	2*	6
Scott	7	x	2*	14
Paul	4	x	1*	4
Totals			*21*	*148*

*The author always gets the highest score based on the number of students in the group.
**Contributor's scores may be the same.

General Questions to Guide Workshops[13]

1. What is the main point of the paper?
2. Do ideas, details, and examples adequately support the main point? Is there a balance between the writer's opinion and material from other testimony? What additional questions can the writer answer in order to provide full support for the main point?
3. How does this paper characterize its writer and its readers as to knowledge and attitude? How are audience and purpose made clear?
4. Does the paper introduce major opposing points of view?
5. How effectively are the materials organized? Can the paper be outlined? How effective is the structure?
6. How has the writer used the framing elements: beginning, linking, ending?
7. Were word choices especially effective or inexact?
8. Are the materials properly documented?
9. Has the paper been carefully copyedited? What are the special strengths or weaknesses in the syntax? What, if any, mechanical problems hinder the reading?
10. Does the paper leave readers with unanswered questions?
11. All in all, what do you find are the strongest elements of this paper?

Questions for Writers to Ask Themselves

1. What am I trying to do in this paper?
2. What is the point of this paper?
3. How does it make the point?
4. What is interesting or significant?
5. Have I given my readers enough information? What else might I include?
6. Should I delete anything?
7. What are strengths of my paper?
8. What are its weaknesses? How can I revise them if I write another draft?
9. Do I have any unanswered questions?

Writer's Protocol

1. Type of essay submitted:
2. Did you read the draft aloud to yourself and/or to others?
3. Who, besides you, read the essay?
4. What changes in the following areas did they recommend?
   A. Thesis
   B. Content
   C. Organization
   D. Style
   E. Surface features
5. What specific changes are you making in any of these areas listed in #4? Why?

Checking Your Writing

1. Is the message written intelligently?
   ______ Is my purpose clear?
   ______ Is the wording correct?
   ______ Is the communication written in plain English?
   ______ Is the wording concise (trimmed down to the essential words and phrases)?
   ______ Is the language (word choice) appropriate for the reader?

2. Is the organizational pattern apparent?
   ______ Do I have an overall plan or direction for my idea?
   ______ Do I follow my plan?
   ______ Do the ideas make sense? Are they easy to follow? Haphazard?
   ______ Are the sentences sequenced logically?
   ______ Are the paragraphs sequenced logically?
   ______ Are the paragraphs divided logically?

3. Is the message complete?
    - _____ Do the ideas include all the necessary information (who? what? when? where? why? how?)?
    - _____ Are the facts correct?
    - _____ Do I provide sufficient information--examples, illustrations, data--to support my ideas?
    - _____ Are my major points emphasized?

4. Is the tone of the message appropriate?
    - _____ Is the tone negative, positive, or neutral?
    - _____ Is the tone official, formal, informal?
    - _____ Is the tone courteous?

5. Is the message written correctly?
    - _____ Is the message punctuated correctly?
    - _____ Are there any missing words?
    - _____ Is the communication correct grammatically?
    - _____ Is the spelling correct?

6. Is the layout effective?
    - _____ Is the communication set in the appropriate format?
    - _____ Is the communication visually appealing?
    - _____ Does the layout enhance or hinder readability?

Questions for Writers to Ask Peers

1. What do you like best about my paper? What is particularly clear about my paper? (Underscore what works.)
2. Are there things in or about the essay that you don't understand or that are unclear? How can I make them clear?
3. Do you find my paper interesting? Are there places where you lose interest? How can I change it?
4. What questions do you have about content or form?
5. What parts of the paper should I consider rewriting? In other words, how can I make the piece more effective?
6. Do you see parts that could be more concise?
7. Do you see any problems with format or correctness?
8. Other (How well has my paper met the specifics of the assignment, etc?)

Questions for Peers to Ask Writers

1. Does your piece achieve what you set out to do? What, in fact, did you set out to do?
2. Did you find the writing exercise difficult? Relatively easy? Can you explain why?

3. What problems did you encounter in the writing process? For example, how did you get started? How did you know where to begin the paper? Or when to stop writing?
4. What would be the effect on the piece if you were to rearrange, amplify, omit, provide more or less detail, offer different evidence, change the language, etc? (Think of specific questions in these areas.)
5. What do you find the most engaging about your paper?
6. How helpful were the comments?

■ Tips for Faculty[14]

1. Because arriving at consensus is time consuming, we need to keep the material under consideration short.
2. For the same reason we may wish to limit the number of questions asked, keeping them brief, simple, and concrete.
3. Work sheets headed with the same general directions should save time. We may want to record group and activity (date, purpose, members, success, etc.).
4. The general direction of the tasks (and questions within each task) and from class to class and week to week should move from low involvement, nonthreatening questions and tasks to high-demand questions and tasks (e.g., sample sequence: from general impression, to explanation of the task, definition of key terms, analysis, synthesis).
5. Group composition should be flexible. We can vary the ways in which groups are formed and should be ready for groups to disband and regroup.
6. We can vary grouping patterns to prevent cliques from forming. As an alternative to predictable dyads, we can pick up papers and hand them out to different students. They then read the paper line by line and note particular features. Papers are then returned to students or to us.[15]
7. We can design an out-of-class assignment resulting from group discussion that is completed individually.
8. Students can identify the criteria for evaluation. We might be surprised at how close the criteria are to our expectations, especially when generated early in the semester. The process may take time, but students take more ownership of it.
9. Regardless of individual task assignment, every group member should simultaneously serve as recorder.
10. Written responses by group members should be signed by them so that, like us, they are held accountable for what they say.
11. Students should debrief after group work. We can ask students to rate the experience: very helpful, mildly helpful, not helpful, harmful. We can ask students to explain briefly any factors that may have interfered with the success of the group experience (inexperience, personality clash, etc.). What might improve the situation?
12. As an alternative to sitting in on a group, we may also leave it alone for the work period.
13. Absence from workshop sessions is usually self correcting.

Tips for Writers

1. Tell the group what your intention was in writing the piece.
2. Before handing out the paper, try reading the first sentence to see if the group can tell what it suggests as its main idea and as the material to be included.
3. Asking for specific help is a good way for you to begin. Find out where your difficulties are, prepare two or three specific questions about your draft: This is the kind of help I need . . . .
4. Don't argue.
5. Be quiet, listen, and understand.
6. Don't automatically reject what readers tell you.
7. Don't stop them from giving you reactions.
8. Don't be tyrannized by what readers say. Writers are always the final arbiter of their own work.
9. Take notes on everything peers say so that responses don't feel tilted toward the negative.

Tips for Readers[16]

1. Make sure you've had a good chance to hear and/or read the writing.
2. When possible, give specific reactions to specific points in the text.
3. No reaction is inherently wrong (only different or insufficient).
4. Don't quarrel with the writer or someone else's reaction.
5. Think of the writer as your boss. Think of yourself as part of a writing committee that is responsible for the quality of writing going out of your division. But you must be tactful because he or she is your superior or a friend whom you want to keep as a friend.
6. Address your comments to the writer and to your peers in the group, not to the instructor. Do so gracefully. You are not in competition.
7. Avoid making directly negative comments: Phrasing your comment in the form of a question is often a good way to avoid negativism. For example, Weak: *I don't like your beginning.* Better: *Do you think the beginning might be too abrupt? I wonder if.... Would you consider...? I am confused by.... I am not sure what you meant by.... Was...the word you wanted to use? Could you have said more about...?*
8. Give a response to the writing instead of advice on it. Tell writers what happened to you as you listened or read. Mention points that confused you, events that you expected to occur, parts that sounded hollow or plastic, etc. Summarize what you heard to determine if what you heard was the message intended. Compare your reaction with those of others to determine whether it was a common one or an exception.

Upper-Division Workshop Formats

Format 1[17]

1. Writers read paper aloud.
2. Listeners listen first and draft a short summary. They then make notes, dividing their page into three columns: positive comments, negative comments, and questions.
3. Writers withhold response until each reader has spoken.
4. Writers then respond.

Format 2[18]

1. Questions: What do you like? What do you want to hear more about?
2. Students look closely at two to three features of the prose, e.g., clarity, development, grammar. On that basis, students derive principles that govern the revision.
3. Students keep a record of errors subdivided by categories (e.g., organization, style, form--any taxonomy will do).
4. When peer editing takes place, students hand over the list along with the essay. Readers note which errors disappear and which new ones arise.

Format 3[19]

1. Students bring copies of work to be shared with groups of three in relay fashion.
2. Author 1 hands work to Editor 2 who hands work to Proofreader 3.
3. Author 2 hands work to Editor 3 who hands work to Proofreader 1.
4. Author 3 hands work to Editor 1 who hands work to Proofreader 2.

Format 4[20]

1. Students agree on one person to record the views expressed in the group, including dissenting opinions. The recorder speaks for the group. For each question, students decide on one answer that represents a consensus among the group members.
2. If the task asks students to interpret a written passage (a primary text, secondary text, or student-written text), the first instruction following the general instructions asks one member (not the recorder) to read the passage aloud.
3. Procedure for members
   A. Read the passage.
   B. Define any terms.
   C. Rewrite the passage in his or her own words.
   D. Check that the statement has expressed accurately what the group has decided.

■ Lower-Division Workshop Formats

General Approach[21]

Students read each piece slated for discussion at least twice, reading for meaning first. Then, in groups of three to four, students answer the following questions for each essay:

1. What do you like most about this essay? Underline the strong passages.
2. Where is the writing vague or hard to follow? Draw a squiggly line for weak ones.
3. What questions do you want me to answer about it? Write them at the bottom of the page.
4. Or respond in only two ways: What was interesting? Where did you want more information?

Readers jot down their responses and comments directly on the copy of the paper as well as on a separate sheet. Students revise, run off copies, and recirculate.

PQP Approach[22]

Praise: What do you like about the paper?
Question: What was vague? Hard to follow? Weak or confusing?
Polish: What suggestions do students have? Or students can use an editing sheet to prompt suggestions.

Nondirective, Rogerian Approach[23]

Students first learn to suspend judgment, not evaluate. They practice setting aside inferences and feelings that they get from the work. Rather, students describe rhetorically. They use only the observations that are facts (e.g., the ending is mostly dialogue) reflecting, repeating what they have heard. Writers will know if it is what they intended.

THE DISCIPLINARY + WRITING CONFERENCE

To try to troubleshoot in writing all of our students' writing problems would probably take years.[24] Conferences solve part of that problem. Conferencing orally gets more done per unit of time than does commenting on paper. Even marking text at a conference, we return papers faster.

The conference is the ultimate in individualized response. The interactions between teachers and students are no longer diffused as in whole class models. Things that cannot happen in a large group or class setting can happen in conference for it depends on face-to-face contact, verbal and nonverbal. Discussion is personalized. Moreover, a wider range of instructor response is achieved than in a written response. Its virtues are also that conferences give students a chance to exploit the language art they know best: talking. Students rehearse in speech. They have a direct audience with immediate feedback. The conference increases students' motivation and builds responsibility. They have opportunities for midcourse corrections and, probably most important, talking promotes discovery.

As faculty, we benefit too. We exchange conversation instead of the lonely tedium of marking papers. The by-products are that as students get to know us, we get to know them individually, often making for a positive pedagogical exchange.

There are different kinds of conferences: talk-write/discovery conferences, analysis conferences, rewrite conferences, editorial conferences, and so on.[25] In any event, given our work load, for conferences to work, instructors must be good listeners, fast readers, good diagnosticians, and time managers, in short, editors on the spot.[26] Particularly if we decide to hold individual or mini-group conferences during class time, probably the most important questions we need to ask are: "What can I give up [vis a vis teaching]?" "What can students do on their own so that I can hold conferences?"

Sites for conferences range from the approach that converts the class to a workshop in which individual conferences are the primary medium of exchange[27] to that of the traditional teacher-centered class with conferences held once or twice a semester in the instructor's office. Of course, conferences can take place anywhere, even in a hallway. In classrooms, we can circulate and thus control the length of conferences. Last but no less important, systematic but flexible conferences must be workable within the departmental or administrative framework because what we do during conferences is likely to be modeled.

■ Tips for Faculty[28]

1. We should sit next to students, not behind a desk or on it, above students.
2. It is helpful to make eye contact.
3. We all talk too much. Allow students to make substantial contributions.
4. Don't control the agenda too tightly. Only one or two major items should be on ours (content, detail, logic, arrangement--syntax only if other areas are satisfactory or unless the errors are egregious).
5. We should maintain focus, not go off on a tangent.
6. Read parts of a paper aloud to students while they read it silently.
7. We can save some of the at-home grading by holding conferences as part of the revision process of a major report or paper.
8. Make the conference a combination of learning and discovery.
9. It is sometimes useful to close the conference by asking students what they are taking from it. What are they going to do next?

10. Try assembling a chart of writing skills to reflect students' achievement up to the point of the conference:

Name	Absences	Late papers of 10	Incompletes of 10	Minor grades 25%	Major grades 50%	Participation 25%
T. Barry	1	0	0	B+ B A	B+	B
H. Bromley	7/1L	1	1	B+ B A	C+	C-/D
T. Colon	1/2L	0	1	B B A	C	C
J. Corbin	2/2L	2	0	A- B- A	B-	C

Examples of Instructor-Sponsored Question Sets

The Two-Minute Conference[29]

Instructors ask[30]:

1. Which paper do you want to talk about?
2. What do you like about this paper? Or what do you like about the way you put it together?
3. What are you not pleased with?
4. What one thing would improve it most?

Instructors ask:

1. How do you feel about the piece?
2. Where do you see it going?
3. What do you plan to do next?

Mid-Semester Conference[31]

Instructors ask:

1. Are you a Brockport College native or a transfer student?
2. What content courses have you taken?
3. How much writing have you done in the field?
4. How do you find the class so far?
5. Let's look at your papers. Do you have questions about them? About the course? (We read any comments to refresh our memory of students' papers.)

6. Did you understand my comments? (This is what worked. This is what confused me.)
7. Are you ready for the next assignment?
8. Any other questions?

COMPUTERS AND WRITING

Computers are tangible proof that institutions of higher education have evolved with current technology. With that, of course, come the inevitable problems: Administrators have problems with the cost of training and the cost of keeping the hardware and software current. Disciplinary instruction becomes even more complicated than usual because we are asked to integrate not only writing into the instructional mix but also word processing applications. Faculty rightly assume that their majors are familiar with the major word processing software. But application problems abound because both word processing software and disciplinary-specific software are not always compatible.

Nonetheless, computers are here to stay. The electronic world brings together the various aims of writing: the expressive, referential, and persuasive. It brings together reading and writing. And it brings together the process-centered strategies of drafting, peer reviewing, revising, proofreading, and conferencing. In a nutshell using the computer in disciplinary thinking and writing reconceptualizes students' understanding of text, alters students' concept of the writing process, links people and sources, and helps students discover and participate in constructing different kinds of texts.[32]

Computers and writing may be divided into two main classes: Closed systems provide information or allow only one preprogrammed response. Open or interactive systems allow several responses as well as original ones[33]:

■ Closed Systems

- Style analyzers: These programs produce preprogrammed responses. For example, they might do a text analysis on writers' composing habits when writers produce a text. They might itemize syntactic habits and suggest options.
- Closed systems provide spelling and grammar checkers.

■ Interactive Systems

- Guided heuristics programs lead individuals through various phases of the composing process by directing and channeling responses through reasoning and/or associative thinking. During both the invention and revising phases such software asks pertinent questions. Creative ideas may also be cultivated by software (*Inspirations*: a graphic organizer helps students create visual representations of their ideas; *Aspects*, a real-time, networked chat program is helpful for improving clear and precise thinking; *Daedalus*, a hypercard program prepares writers for drafting an essay through a series of questions).

- Computer Assisted Instructional (CAI) programs are used for skill/drill/editing practice; tutorials on surface features (grammar, spelling, punctuation) are reminiscent of workbooks or overheads.

■ Open Systems

- Strict word processing

■ Computer Workshop Basics[34]

So that we can introduce to them the fine points of the program we intend to use, students should come to the computer lab prepared with the basic skills:

1. Formatting disks.
2. Getting into the program.
3. Naming file. Saving to A drive. Accessing the save feature from the icon bar and the tool bar.
4. Establishing headers, footers, dates, and pagination.
5. Manipulating line spacing.
6. Setting paragraph, list, outline formats.
7. Highlighting and altering: copying, moving, cutting, and pasting.
8. Undoing/Redoing.
9. Spelling check. The program will make proofreading easier, but obviously will not recognize the difference between "to" and "too."
10. Printing the document. Students should be able to access the print icon and/or the feature from the file menu, including print preview, print quality, number of copies, type of printer, etc.
11. Exiting the program.

Ask for a two-page report that shows students can underline, italicize, bold, double space, single space, and center, paginate, and so on.

Sample Student Assignments (see also ideas for writing informally in Appendix Part 3)

1. Students sign up to come to class with two printouts of a particular writing assignment and a floppy copy. Peers critique the paper thoroughly and then must take the floppy copy and actually revise the peer's paper.

2. We put up on computer a paragraph that is filled with logical and/or mechanical errors. Students revise it deeply (see Chapter 3).
3. Students observe a revision process. Project an essay on screen. Students have hard copy, or the piece of writing is networked. We or a student shows how we (or he or she) goes about revising, using a think-aloud approach.
4. Install various passages from on-line files. Ask students for quick 10-minute responses to them. Use any and all prewriting techniques: pentad, tagmemics, topoi, journalistic questions, brainstorming (see Chapter 2). Students start in the middle of an idea, not necessarily the opening.
5. Students do a composing process: brainstorm, underline ideas, delete weak material, expand good material, and arrange it.
6. Write invisibly (turn monitor off).
7. To sensitize students to audience, create dialogue. Load in one person's dialogue and ask peer to type in their version. Change names, ages and/or sexes and see how it affects dialogue.
8. Menu-Driven: Place in file for students to flesh out (predetermined order):
    A. Describe the appearance of the subject.
    B. Compare the subject to another subject.
    C. Show how the subject has changed over time.
    D. Show what caused the subject to be the way it is now.
    E. Describe the importance of the subject.
9. Assign writing using these phases:
    A. Find a subject.
    B. Explore a subject; idea gathering.
    C. Organize information about a subject (categorizing).
    D. Draft the paragraph/essay.
    E. Revise the paragraph/essay.
    F. Edit the paragraph/essay.
10. List information and ask the following questions:
    A. What are your terms?
    B. What are their characteristics?
    C. How are they organized?
    D. How do they work?
    E. Where do terms appear?
    F. What in their class is unlike them?
    G. To what extent can they change before they become something else?
11. Planning. Students may use terms, sentence outlines, or a template:
    Title:
    Purpose:
    Materials:
    Methods:
    Results:
    Conclusions:

12. Recreate the following grid on the computer and ask students to fill in the columns:

Larger Context of Subject________________________________

Features (static) What are its characteristics?	**System** (static) How is it organized?	**Operation** (dynamic) How does it work?
Contrast (static) What, in its class, is unlike it?	**Distribution** (static) Where do you find it?	**Change** (dynamic) How can it change and still be itself?

13. Write a letter. Name your recipient, e.g., your superior. Now think about what kinds of opinions your superior has about policy, research, promotion, and so on. Ask him or her about these issues. Which of these statements do you think he or she would most likely agree with?

Tips for Faculty

1. Get over to the computer lab a couple of times to familiarize yourself with the setup.
2. For students having difficulty with composing, the computer tends to slow down the process. To start, separate training on the fine points of a chosen word processing program from serious writing tasks. Rather, have students write about something familiar and easy.
3. We need always to have a contingency plan in case our computer plan runs aground.
4. Some students are bound to be better than others. Make them floaters or seat them next to students who are weak in word processing. Or pair good and bad writers.
5. In between computer room sessions, assign students word processing practice for homework.
6. Under examination conditions, always give students the option of using a computer or handwriting.
7. When appropriate, we should admit our own inexperience.

APPENDIX

TABLE OF CONTENTS

***Appendix* Part 1** **377**
Editing/Evaluating Forms 377
"A Rationale for the Use of Common Business-Letter Expressions" 385
Surface Feature Correctness Exercises 391
Tone 399
Syntax 402
Punctuation 405
And Notes on... 407

***Appendix* Part 2** **413**
Questions for Thinking 413
"Reports, Inferences, Judgments" 415
"Differences Among the Argument, Explanation, and Hypothesis" 420
Example of Weak Student Case Study 422
Model for Diagnostic Evaluation 424
Audience 427
"What is Stress" 428
Checklist for Analyzing Arguments 432
Thumbnail History and Systems of Critical Thinking 434
Key Definitions in Formal Logic 444
The Brockport Policy on Student Academic Dishonesty 454
"On Plagiarism" 455
"The Scientific Method" 457

***Appendix* Part 3** **459**
Select Course Descriptions 459
Course Proposal Guidelines 463
Ideas for Writing Informally in the Content Areas 463
Evaluating Textbooks 465

APPENDIX PART 1

EDITING/EVALUATION FORMS

■ Editing/Evaluation Form for Describing Events, People, or Things

YES		NO		
___	___	___	___	The language is concrete, vivid, and relevant.
___	___	___	___	The writer establishes and sustains a natural, personal voice.
___	___	___	___	1. The title suggests the topic and the writer's attitude toward it.
___	___	___	___	2. The opening sentences capture the reader's interest.
				3. The development.
___	___	___	___	A. There is extensive use of essential as well as finer sensory detail.
___	___	___	___	B. The material is organized spatially or chronologically or in another relevant pattern.
___	___	___	___	C. Choice of language enhances the dominant impression of the piece.
___	___	___	___	4. The ending establishes a sense of closure.
				5. Surface features.
___	___	___	___	A. Sentences are relatively free of grammar usage errors.
___	___	___	___	B. Punctuation enhances meaning and follows current conventions.
___	___	___	___	C. Spelling is nearly always accurate.

■ Cover Sheet for Describing Events, People, or Things

1. What subject are you describing? How did you come to choose it? Why is it important in your life?

2. Who are your readers? How did your awareness of them influence the way you wrote this draft? Be specific.

3. How do you want your readers to view this subject? How have you avoided either condemning, idealizing, or sentimentalizing it? Explain.

4. List any places, anecdotes, and/or people in your essay. Which ones are most vividly presented? Which may need further detailing or less?

5. Explain briefly the plan of your essay--your beginning, ending, and sequencing of observations and comments. Why is this plan especially appropriate?

6. Note one or two ways you might strengthen your plan.

7. A. What sources did you consult, if any?
   B. Who helped you prepare this essay?
   C. What specific contributions did they make?

■ Editing/Evaluation Form for Classifying Experiences, Concepts, and Phenomena

YES NO

___ ___ ___ ___ The paper establishes and sustains an informed, unbiased, and credible voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the term being classified.

___ ___ ___ ___ The writer makes the term tangible or real for the reader. The thesis indicates the author's approach, organizational strategy, and utility of such a grouping.

1. The introduction.
   - ___ ___ ___ ___ A. The opening sentences introduce the term as belonging to a general class and differentiates it from other members of the class by naming its distinguishing attributes.
   - ___ ___ ___ ___ B. The writer establishes the need for a more thorough examination of the concept, experience, or phenomenon.

2. The development.
   - ___ ___ ___ ___ A. The body of the paper follows the guidelines of the thesis and is adequately developed.
   - ___ ___ ___ ___ B. The categories are evident and major similarities and differences are clearly identified.
   - ___ ___ ___ ___ C. There is appropriate use of examples, statistics, authorities, or other supporting materials.
   - ___ ___ ___ ___ D. Transitions are evident between sentences and paragraphs.
   - ___ ___ ___ ___ E. Exclusions are clarified.

3. ___ ___ ___ ___ The closing suggests the relevance of the classification to other situations, issues, and relationships to the world.

4. Surface features.
   - ___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.
   - ___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.
   - ___ ___ ___ ___ C. Spelling is nearly always accurate.

■ Cover Sheet for Classifying Experiences, Concepts, and Phenomena

1. What phenomena are you sorting? How did you come to choose it?
2. Who are your readers? How well do they know the subject matter?
3. List the components of your classification system.
   How did you organize your paper? What other organizational patterns might you have chosen?
4. A. What sources did you consult, if any?
   B. Who helped you prepare this paper?
   C. What specific contributions did they make?

■ Editing/Evaluation Form for Comparing Experiences, Concepts, and Phenomena

YES NO

___ ___ ___ ___ The paper establishes and sustains an informed, unbiased, and natural voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the object or concept being compared.

___ ___ ___ ___ 1. The title helps the reader focus on the ideas to be presented.

2. The introduction.

___ ___ ___ ___ A. The opening sentences contain an anecdote, question, or assertion to stimulate reader interest.

___ ___ ___ ___ B. The categories of similarities and differences are stated.

3. The development.

___ ___ ___ ___ A. The body of the paper develops directly out of the introduction.

___ ___ ___ ___ B. The similarities and differences are discussed as they appear in the opening.

___ ___ ___ ___ C. A plan or organization is discernible (block, point by point, or a combination of both).

___ ___ ___ ___ D. The presentation includes several kinds of information.

___ ___ ___ ___ E. The writer weaves the material together with connectives and semantic links.

___ ___ ___ ___ 4. The ending suggests how the discussion helps the reader or is related to other issues or larger contexts.

5. Surface features.

___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.

___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.

___ ___ ___ ___ C. Spelling is nearly always accurate.

■ Cover Sheet for Comparing Experiences, Concepts, or Phenomena

1. What have you chosen to compare? How did you decide on it? What is your sense or interpretation of it?
2. Why is the subject worth writing about?
3. Are there enough differences or similarities between the two phenomena to merit a comparison or contrast?
4. Who are your readers? What can you assume they know about your subject?
5. List the comparisons and contrasts in your paper, and briefly describe the purpose of each.
6. Which organizational pattern did you choose for this paper (block, point by point, or a combination of both)? Why is it the most effective for the subject?
7. A. What sources did you consult, if any?
   B. Who helped you prepare this paper?
   C. What specific contributions did they make?

■ Editing/Evaluation Form for Defining Experiences, Concepts, or Phenomena

YES NO

___ ___ ___ ___ The paper establishes and sustains an informed, unbiased, and natural voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the object, activity, or concept being defined.

___ ___ ___ ___ The writer makes the term tangible or real for the reader.

___ ___ ___ ___ 1. The title identifies the term and suggests the author's approach to it.

2. The introduction.
   - ___ ___ ___ ___ A. The opening sentences introduce the term as belonging to a general class and differentiate it from other members of the class by naming its essential/common distinguishing attributes.
   - ___ ___ ___ ___ B. The writer establishes the need for a more thorough examination of the object, activity, or concept.

___ ___ ___ ___ 3. The development. The writer extends the explanation.
   - ___ ___ ___ ___ A. Necessary details are provided.
   - ___ ___ ___ ___ B. Major subclasses and terms embedded in the primary term are accounted for.
   - ___ ___ ___ ___ C. Exclusions are clarified.
   - ___ ___ ___ ___ D. The writer incorporates several of the following types of evidence.

     Direct experience
     Observation (the senses)
     Casual and formal reading
     Conversation with or testimony of authority
     Recall
     History
     Reasoning
     Legal precedent or policy
     Analogy
     Conventional/Received wisdom

   - ___ ___ ___ ___ E. The writer usually but not always arranges the material in descending order of importance.
   - ___ ___ ___ ___ F. The writer weaves the ideas together with semantic links/connectives.
   - ___ ___ ___ ___ G. The writer anticipates the reader's ideas about the topic and attempts to clarify terms and dispel misunderstanding.

4. The ending.
   - ___ ___ ___ ___ A. It reinforces the thesis and draws parts together.
   - ___ ___ ___ ___ B. It leaves the reader with a sense of completeness.

5. Surface features.
   - ___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.
   - ___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.
   - ___ ___ ___ ___ C. Spelling is nearly always accurate.

■ Cover Sheet for Defining Experiences, Concepts, or Phenomena

1. What subject are you explaining? How did you come to choose it?
2. As you learned more about your subject, what possible focuses emerged? Why did you choose your particular focus?
3. What main point do you make about your subject?
4. Who are your readers? What do you assume they already know about your subject?
5. Explain briefly how you've organized the information in order to present it in your paper. Why is your organization especially appropriate for your readers?
6. List the essential distinguishing attributes of your subject.
7. A. What sources did you consult, if any?
   B. Who helped you prepare this paper?
   C. What specific contributions did they make?

■ Editing/Evaluation Form for Seeking Causes or Consequences

YES NO

___ ___ ___ ___ The paper establishes and sustains an informed, unbiased, and natural voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the trend or phenomenon under discussion.

___ ___ ___ ___ The writer understands the difference between causes and effects.

___ ___ ___ ___ 1. The title helps the reader focus on the relationship between the phenomenon and its causes or effects.

2. The introduction.
   - ___ ___ ___ ___ A. The opening sentences contains an anecdote, question, or assertion to stimulate reader interest.
   - ___ ___ ___ ___ B. It leads into a discussion of the content or nature of the causes or effects (preferably not both).

3. The development.
   - ___ ___ ___ ___ A. The body of the paper follows the guidelines of the thesis and is adequately developed, not merely listed.
   - ___ ___ ___ ___ B. The writer distinguishes between contributory and main causes or between minor and major effects.
   - ___ ___ ___ ___ C. There are appropriate uses of examples, statistics, authorities, or other supporting information.
   - ___ ___ ___ ___ D. The paper uncovers any causal/consequential chains and clarifies them.
   - ___ ___ ___ ___ E. A plan or organization is discernible.
   - ___ ___ ___ ___ F. Transitions are evident between sentences and paragraphs.
   - ___ ___ ___ ___ G. The conclusion suggests the relevance of the causes or consequences to other contexts, issues, and relationships.

4. Surface features.
   - ___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.
   - ___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.
   - ___ ___ ___ ___ C. Spelling is nearly always accurate.

■ Cover Sheet for Seeking Causes or Consequences

1. What trend or phenomenon are you writing about? Why are you seeking its causes or consequences?
2. If it is a trend, when did it begin and to what extent has it increased or decreased over time?
3. Who are your readers? Describe briefly what you assume they already know about your subject.
4. How did your awareness of your readers influence the way you wrote this draft? Be specific.
5. Why did you arrange the material as you did?
6. What other possibilities could you consider for beginning, ending, and organizing the paper?
7. List the cause (s) or consequence (s) you used to explain the trend or phenomenon.
8. A. What sources did you consult, if any?
   B. Who helped you prepare this paper?
   C. What specific contributions did they make?

■ Editing/Evaluation Form for Proposing or Recommending Solutions

YES NO

___ ___ ___ ___ The paper establishes and sustains an informed, natural, and credible voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the problem.

___ ___ ___ ___ 1. The title suggests the issue and the writer's position on it.

2. The introduction.
    ___ ___ ___ ___ A. The opening sentences set the context and stimulate interest in the subject.
    ___ ___ ___ ___ B. The writer states the problem.

3. The development. The writer uses testimony, facts, firsthand experience, reading, and/or anecdotes to explain the problem and solutions.
    A. The problem.
        ___ ___ ___ ___ 1) The writer explains the problem clearly.
        ___ ___ ___ ___ 2) He or she provides convincing reasons for reader concern.
        ___ ___ ___ ___ 3) The writer elaborates on who or what caused it.
    B. Solutions.
        ___ ___ ___ ___ 1) The writer acknowledges alternative solutions.
        ___ ___ ___ ___ 2) He or she provides a clear explanation of the ways to implement the solution.
        ___ ___ ___ ___ 3) The writer describes how the solution best alleviates or eliminates the problem.
        ___ ___ ___ ___ 4) The writer provides reasons why the suggested solution is superior to others.

4. Surface features.
    ___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.
    ___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.
    ___ ___ ___ ___ C. Spelling is nearly always accurate.

■ Cover Sheet for Proposing or Recommending Solutions

1. What problem are you trying to solve? Why is it significant? Who is affected by the problem, and how much do they know about it?

2. What solution for the problem are you proposing?

3. List alternative solutions you have considered. State briefly why you rejected them.

4. How does the organization of your material contribute to your recommendation?

5. Is there another similarly effective organization? Describe.

6. Who are your readers? Be specific in identifying them (an individual, committee, group, or the people affected by the problem). What action do you want them to take?

7. A. What sources did you consult, if any?
    B. Who helped you prepare this paper?
    C. What specific contributions did they make?

■ Editing/Evaluation Form for Taking a Position

YES			NO	
				The paper establishes and sustains an informed, natural, and credible voice.
				The writer establishes credibility by demonstrating knowledge, sound reasoning, and insight into the **complexity** of the issue.
				The tone is inoffensive to those who differ from your position.
				1. The title suggests the subject and the writer's attitude toward it.
				2. The introduction.
				A. It establishes common ground with the reader about the subject.
				B. It establishes the importance of the issue.
				C. It states the assertion or thesis.
				3. The supporting arguments.
				A. The writer introduces appropriate and sufficient explanations, illustrations, and/or other forms of evidence.
				1) He or she establishes logical (inductive, deductive) proof from facts, testimony, and/or real experience.
				2) The writer employs emotional and ethical appeals that support the argument.
				B. The supporting arguments are organized strategically.
				4. The counterarguments.
				A. The writer concedes important opposing arguments, especially the valid ones.
				B. He or she identifies emotional and ethical appeals in the counter arguments.
				C. The writer refutes illogical and unsupported counter arguments.
				5. The ending calls for realistic action or further study.
				6. Surface features.
				A. Sentences are relatively free of grammar and usage errors.
				B. Punctuation enhances meaning and follows current conventions.
				C. Spelling is nearly always accurate.

■ Cover Sheet for Taking a Position

1. What controversial issue are you writing about? Why are people still debating it?
2. What is your position on the issue?
3. Who are your readers and how do you want to influence them?
4. How did you field the readers' objections that you could anticipate?
5. List the reasons why you took this position.
6. Why did you sequence your material the way you did?
7. How else might you have arranged your material?
8. A. What sources did you consult, if any?
   B. Who helped you prepare this paper?
   C. What specific contributions did they make?

Editing/Evaluation Form for Analyzing and Interpreting Nonfiction Prose

YES NO

___ ___ ___ ___ The analysis establishes and sustains an informed, natural, and credible voice.

___ ___ ___ ___ The writer shows insight into the **complexity** of the subject.

___ ___ ___ ___ The title suggests the subject under discussion and the writer's attitude toward it.

1. The introduction.
    - ___ ___ ___ ___ A. The introduction stimulates the reader's interest.
    - ___ ___ ___ ___ B. The introduction includes the title and author of the article as well as his or her focus or position.
2. The development.
    - A. Content (the **what** of the material).
        - ___ ___ ___ ___ 1) The writer summarizes and analyzes the **subject** of the essay.
        - ___ ___ ___ ___ 2) The writer considers the merits of the subject by acknowledging other viewpoints or the limitations of the author's position.
    - B. Presentation (the **how** of the material; how the author conveys his or her ideas).
        - ___ ___ ___ ___ 1) The writer explains the rhetorical strategies used.
        - ___ ___ ___ ___ 2) He or she notes the proportion, arrangement, and kinds of arguments (logical, ethical, emotional).
        - ___ ___ ___ ___ 3) The writer identifies the tone of the material and features of the author's style (figures of speech, word choice, rhetorical repetition, sentence structure) that affect the argument.
        - ___ ___ ___ ___ 4) The writer acknowledges the strengths (if any) and weaknesses (if any) in the author's presentation and provides reasons for them.
3. The ending.
    - ___ ___ ___ ___ A. The conclusion draws together the various parts of the rhetorical analysis.
    - ___ ___ ___ ___ B. It establishes a relationship with other views and/or with the larger context of which both the material and the author's rhetorical style are a part.
4. Surface features.
    - ___ ___ ___ ___ A. Sentences are relatively free of grammar and usage errors.
    - ___ ___ ___ ___ B. Punctuation enhances meaning and follows current conventions.
    - ___ ___ ___ ___ C. Spelling is nearly always accurate.

Cover Sheet for Rhetorical Analyses : Analyzing and Interpreting Nonfiction Prose

1. What essay did you choose to analyze? What made you decide to use it?
2. What issues or subject matter did you focus on? What is your working thesis?
3. What approach did you use to analyze the content of the essay?
4. What approach did you use to analyze the author's style?
5. List the details you chose to support your focus.
6. Who are your readers (e.g., other potential readers of the essay, people affected by the content of the essay, antagonists, protagonists)?
7. A. What sources did you consult, if any?
    B. Who helped you prepare this essay?
    C. What specific contributions did they make?

A RATIONALE FOR THE USE OF COMMON BUSINESS-LETTER EXPRESSIONS

Harold Janis[1]

The aim of this paper is to provide a rational basis for the use of stock words and phrases in business letters. This aim follows the hypothesis that such expressions can, under controlled conditions, serve the needs of business and at the same time avoid criticism on stylistic grounds. Resolving the question of usage is important in order to stop the great waste of time in promoting language values that are often at odds with the business culture. It is also important if the constantly increasing volume of routine correspondence is to be handled in an effective and acceptable way by computer or other systematic means.

The number of pejorative terms used to describe common business-letter expressions suggests the difficulty of treating (and viewing) the subject dispassionately. Adjectives like *stereotyped, stilted, hackneyed*, and *trite*, and nouns like *cliches, jargon, bromides, businesses*, and *gobbledygook* have so colored our attitudes toward certain types of words and phrases that any attempt to treat the offending usages on a reasonable basis risks skepticism and antagonism. To eliminate, or at least reduce, the affective connotation, we shall hereafter use the abbreviation CBE to signify a common business-letter expression.

■ Factors Favoring CBEs

This author has previously shown that the use of certain common business expressions is grounded in the demands of the business situation. The organizational factors favoring the use of CBEs may be summarized as follows:

1. Letter writing in business is highly repetitive. The same situations occur again and again, providing the writers with ample precedent for both the substance and phrasing of the letters. If this were not so--if each situation were unique or had to be treated as if it were--business correspondence on a large scale would take a disproportionate amount of the organization's energies.
2. CBEs increase efficiency by providing ready clues to rhetorical patterns and consequently reducing the uncertainties of expression. For example, given the initial phrase *with reference to your letter of*, the writer is easily able to begin not just one letter but a great many. When the writer is required to begin the letter in less redundant (less predictable) fashion, e.g., *We don't know how we mislaid your order*, he is left completely to his own devices and, furthermore, cannot rely on such phrasing to provide any assistance in composing other letters.
3. CBEs help to reduce the uncertainties of response. From the point of view of the writer's superior, new language treatment increases the risk of message failure, including misunderstanding and legal liability. He is therefore inclined to reject originality in favor

of phrasing proved by experience. Conformity is thus enforced by the threat of non-acceptance.

4. CBEs permit the correspondent to be impersonal in the many instances when he does not have any personal involvement in his subject or considers it desirable to avoid personal responsibility. In many instances the correspondent has had only a small part in the transaction about which he is writing for some other person's signature. The tradition of the particular company or department for which the writer works may also encourage his self-effacement. The use of CBEs like *receipt is acknowledged, the undersigned*, and *our records indicate*, becomes more understandable in the light of this explanation.

■ Reconciling Conformance with Effectiveness

If, as it is indicated, the business environment nurtures conformance in language rather than freshness and originality, how is the use of CBEs reconciled with the need for effectiveness? Several explanations may be offered. First, despite the emphasis on the human relations function--and the need for individuality that goes with it--the task function is paramount in a huge volume of business correspondence, certainly in the routine situations most likely to be handled by subordinates. And whatever the prevalence of CBEs, the routine business-letter tasks apparently do get done.

Second, the factors that make CBEs desirable for the writer also make them desirable for the reader. When similar situations keep arising between the two parties, the reader's response to the language is conditioned by his experience with it. Changing the language then becomes analogous to changing the color or design on a can of beans. Whatever the improvement, there is at least temporary disorientation.

Third, the value the reader places on the distinctiveness of a business letter can easily be overestimated. Apart from the substance, which is of the most immediate concern to the reader, a number of other factors contribute to the total impression the letter makes. These include its physical make-up, its timeliness, the rapport with the signer, and the reputation of the source.

Finally, the balance between an efficient style and effectiveness is preserved by what we shall call the fraction of composition. Following Schramm's concept of the fraction of selection (the attention paid to a communication)[2] the fraction of composition may be represented as follows:

Expected Reward: Fraction of Composition = Expected Energy Required

As the formula signifies, the more meaningful the anticipated response to the letter, the more available energy the writer or organization expends. Thus routine letter situations that have been adequately (if not triumphantly) handled in the past by unique situations that promise greater rewards (or greater penalties) provide greater incentive for individual treatment. In the simplest terms, the language of a letter gets all the emphasis it warrants, consistent with the proficiency of the writer and the competition for his time and energy.

Stylistic Considerations

We have yet to deal with the stylistic or esthetic objection to CBEs. This objection appears to be based on the loss of individuality that occurs whenever cliches are used. Thus cliche becomes the operative word. According to Beckson and Ganz, a cliche is "a timeworn expression which has lost its vitality and to some extent its original meaning."[3] Margaret Nicholson defines cliches as hackneyed phrases that "have acquired an unfortunate popularity and come into general use even when they are not more but less suitable to the context than plain speech.[4] Fowler says that "cliche means a stereotype; in its literary sense it is a word or phrase whose felicity in a particular context when it was first employed won it such popularity that it is apt to be used unsuitably and indiscriminately."[5]

The test of a cliche, then, is not that it is common, but that it is both common and unsuitable for its context. On this point Fowler offers some elaboration:

> The word is always used in a pejorative sense, and this obscures the truth that words and phrases falling within the definition are not all of a kind. There are some that deserve the stigma, there are others that may or may not deserve to be classed with them--that depends on whether they are chosen mechanically--or are chosen deliberately as the fittest way of saying what needs to be said.[6]

Adding that "the enthusiasm of the cliche hunter is apt to run away with him," Fowler quotes from J.A. Spencer that "the hardest working cliche is better than the phrase that fails" and "journalese is best avoided by the frank acceptance of even a hard-worn phrase when it expresses what you want to say."[7]

What has been said of cliches can be said of CBEs. The words and phrases falling within the definition are not all of a kind. What matters is their appropriateness in the context in which they are used. To give an example from commercial writing, *we wish to advise you* would be stereotyped in a letter acknowledging an order, but not necessarily inappropriate in a legal notification. As the example suggests, an important clue to the aptness of CBEs can be found in the stratification of style, which is characteristic of organizational correspondence. In this respect, four levels of usage may be noted:

Official This style is used in correspondence of a legal or quasi-legal kind, including claims, requests, notifications, and acknowledgments. In addition to its immediate utility, the correspondence also serves as a formal record of a transaction. The style is highly impersonal and characterized by stilted expressions that would be considered out of place in other kinds of writing. Such expressions arise out of either the desire to preserve the legal tone (and force) of the message or the need for exact reference. They include *pursuant to, advise*, (in the sense of "inform"), *above-captioned, therein, thereto, thereof, therefore, due to* (as a preposition), *subsequent to, held in abeyance, duly*, and *pending receipt of.*

Formal The formal style serves many purposes calling for an impersonal but not legalistic treatment. The communications may include letters of introduction and recommendation, credit references, early collection letters, and correspondence on routine matters with agents who are not emotionally involved in the situations. In addition to the use of the impersonal *we* (for *I*), *the writer*, and *the undersigned*, the style is also characterized by polite expressions like *kindly* (for *please*) and *at your earliest convenience*, and such formal but wordy expressions as *in the amount of, with reference to, in connection with, in the event that*, and *our records indicate.*

Informal The informal style is suitable for most business letters. It is characterized by a personal interest in the reader and contains a considerable amount of affective language, including such expressions as *glad, pleased, sorry*, and *appreciate*. Thus the human relations function, while not necessarily absent in the official and formal styles, it is more prominent-- sometimes predominant--here. Informality is enhanced by the personal pronouns *I, we, you*, active verbs, and natural (unstilted) phrasing.

Familiar When writer and reader know each other quite well, and especially when they meet socially or address each other by their first names, the familiar style may be appropriate. It is marked by colloquial expressions, clipped sentences, and an occasional touch of humor. Although any form of stiltedness is incongruous in this style, such CBEs as *with all good wishes*, and *kindest regards* are quite common.

■ Guidelines for the Use of CBEs

Given these classifications of usage, we are in a better position to determine the rightness of CBEs in particular situations. We are also better able to form judgments about the use of CBEs generally:

1. The chief objection to CBEs in business letters is that they are "not natural." Obviously, such a criticism cannot apply to the official and formal styles, which imply a degree of stiltedness. When the criticism is applied to letters for which the informal style would be best suited, the substitutes usually recommended are not original modes of expression but other CBEs that will pass as natural. The contrasting phrases that follow, for example, have been compiled from several well-known texts on letter writing:

Stilted CBEs	**Natural CBEs**[8]
at your earliest convenience	as soon as you can
attached herewith	attached is
this is to acknowledge receipt	thank you for
awaiting your further orders	we shall expect to hear from you
under separate cover	separately
as per instructions following your	instructions
pursuant to your request	as you requested

2. Much of the prejudice against CBEs is really a prejudice against the use of official or formal language in situations that would be more appropriately handled by informal language. This is legitimate criticism. The following letter, for example, is needlessly stilted, as the writer himself seems to sense in the postscript:

> Gentlemen:
>
> We are carrying you on our mailing list as follows:....Will you please return this notice with any corrections shown thereon which should be made? If the above information is correct, we should appreciate advice from you to that effect so that our records will be complete.
>
> Yours truly,
>
> P.S. In other words, we would appreciate having your correct mailing address.

3. Any excesses in the use of CBEs are bad style. Thus while *thank you for* is suitable in informal usage, it palls when it is used without discrimination to acknowledge incoming letters. Similarly, the stiltedness characteristic or formal or official usage becomes a travesty in a passage like the following:

> In response to your letter of March 26, which was in reply to our letter of March 24, which was in reply to yours of March 16, we are enclosing herewith the photostatic copy of our check No.60432 dated February 26, 19__, payable to (Name) in the amount of $6,455.54.

4. Some CBEs are hard to justify in any circumstances. This judgment would apply to trade jargon, which is not adapted to the reader and for which there are reasonable adequate

substitutes. It would also apply to archaic or stilted or pretentious expressions that might include: *and oblige, we remain, as per, your goodselves*, the *instant matter, favor* (for letter), and *summarization* (for summary).

5. Regardless of the level of usage, expressions that are stylistically undesirable in some instances are defensible and even appropriate in others. For example, a certain credit department recommends to its correspondents a guide letter in which the following form appears: "...(company) is engaged in the (manufacture) of...." One might contend that "the company manufactures" is simpler and therefore better. From the credit department's point of view, however, the phrase *engaged in* is a clear reminder of the kind of information that is to be given at that point. The word *manufactures* following the word *company* would not suggest as well to the correspondent the possibility of such substitutions as *imports, retail*, or *jobs*. It is also evident that the noun construction, which gives the common name of the company's activity, is less awkward than the verb construction in some instances (as "the company jobs") and is better suited to the purpose of the letter.

In summary, (1) use of the common business expressions (CBEs) most often associated with routine business letters is a normal consequence of the business culture; (2) such use is not inconsistent with the need for effectiveness; (3) CBEs are not necessarily cliches and may therefore be exempt from criticism on aesthetic grounds; and (4) the criterion of good usage in a CBE is its appropriateness to the business situation and the formality of the context.

SURFACE FEATURE CORRECTNESS EXERCISES

STYLE

■ Clarity

Clarify these sentences and phrases by reducing the heavy nominalization or noun modifiers:

1. market share objectives
2. target identity
3. leadership position
4. customer perception
5. management capability
6. habit patterns
7. expanding the training centers programs offerings
8. final council meeting arrangements
9. the branch office's manual distribution procedures
10. Special characters are used in the construction of boxes.
11. The department assists with the preparation of budgets.
12. The composition and the dictation of the letter took more than an hour.
13. The supervisor gave her approval of my idea for the reduction of waste.
14. The committee members were in agreement on giving help to Mr. Fain in making the decision on priorities.
15. Jane Porter gave an explanation of cost accounting to our staff.
16. I prepare written reports for the director of claims on special project studies.
17. John Brandon will perform the establishment and enforcement of new security procedures.
18. Prior experience makes a difference in the prediction of attitudes toward division heads.
19. Current Dialog Manager implementation limits models to 80-character record lengths.
20. Your participation and enthusiasm is essential, silence only means that we accept our situation for whatever it is worth.
21. My major goals are to progress into management and better myself and the company in this progression.
22. Ask for possible reasons and determine what can be done in the future to prevent a recurrence.
23. A review of the enclosed Operator's Total Liability Report may lead to some immediate conclusions on your part.
24. Such negativism can alter social productivity and mental health to the extent of minimizing potential growth in all areas.
25. It is the purpose of this letter to provide you with information regarding the system definition, project planning communications protocol, and equipment types that will be supported within this system.

26. The objective of the program is to improve the non-native speaker's competence in edited English corporate prose.
27. I feel my present position will afford me an excellent opportunity to begin to achieve my goal.
28. This check when consolidated with the sum of $741.00 and our check for $150.00 brings this claim to finalization in the sum of $1076.00.
29. In this way, verbal expression may serve a highly useful role in the business of taking advantage of the adaptiveness of managers.
30. The Structured SCRIPT On-line Documentation Aid (SSODA) is a software package running under TSO/ISPF which will assist the project team in the creation and printing of a System Design Report.
31. Timeliness report detail for the month of April 1981 elapsed time between order registration and shipment of St. Louis (excluding future and backorders) was as follows:
33. The mid-month annual forecast should include the prior month actual year-to-date and the current mid-month forecast plus the succeeding months remaining of the year.
34. My interest in taking this course stems from my awareness of top level management's commitment to excellence in written communication.
35. The health care market environment and hospitals are being forced to shift from maximizing resource utilization to optimizing the use of limited resources.
36. Technical specialists from McAuto reponsible for the process related design software packages will illustrate the types of applications pertinent to Mallinckrodt designs.
37. Two electricians accomplished the calibration of the meters before noon, but a cessation of power caused a postponement of start-up time until they could find a solution to the problem.
38. In the preparation of his government report, Jim Gerard made an examination of registration figures from the last election.
39. The election of personnel for the administration of the company's new retirement program was done by a committee under the supervision of Jane Winchester after her consultation with the legal department.
40. Utilization of silicone adhesive in the attachment of speaker grilles to radio cabinets results in a .05% reduction in the cost of construction of radios.
41. The clear value of the MFK for the member node for their security module can optionally be controlled by MCI or the member.
42. If this percentage is still excessive, then a program to heighten the awareness of your personnel should show results.
43. The department gathers communication statistics daily from ACD and Dimension systems and handle irate shippers or agents when necessary for operators.
44. All the work quoted will be performed by Ryan Incorporated in accordance with the bid contract documents and shall be complete.
45. Your statement as to not proceeding with work without authorization by either EFO or bulletin contractual change is in accord with the contract.

46. The pay item is a three digit number, providing a breakdown within job numbers to separate bid packages, and to separate buildings A and B within Job 8217.
47. Should reverse video be a standard attribute on all input fields? If yes, then the transaction initiation area will display as reverse video.
48. To optimize the use of disk space and to protect all valuable data files for the Services Information Support System (SISS), the primary use of the user ID D86DA is for the production of the SISS programs. For other uses, please log on to D86E.
49. As team members joined the project at intervals, not all of them attended this training program at the same time. Four or five programmers would begin training, then several days later, another group would begin. This training program effectively integrated the programmers into the MIC's implementation team.
50. I believe that you will find them both with the potential of being powerful tools to better aid management in controlling project activities.
51. While some progress has been made at the Headquarters level, as evidenced by proposed changes in undercollection billings, the Center's impact as a change agent has been minimal due to the fact that it is generally not known to the agency family.
52. The national account key traffic personnel were polled with regard to claim settlement requirements as were the various other aspects of our industry.
53. Memo completeness is not a serious problem, but closer attention to consistently indicating order numbers, pre-trip inspections, etc. would eliminate the omissions which do occur.
54. I would appreciate your help in two ways. One, which areas of systems programming do you or your staff think our analysts might improve on by participating in a systems programming institute?
55. Directors or division heads, groups of directors or divisions, entire departments or other organized units, with quality projects within the company's mission are eligible.
56. The deletion of unnecessary paragraphs was the intention of the review committee. However, two members made objection to the omission of one paragraph which had relation to health-care benefits. They were in agreement with the rest of the committee that all members had earlier made a decision about deletion of the paragraph, but they wanted a new discussion of the reasons for the deletion of it.
57. However, since ROIs are an important tool in evaluating our businesses and consistency is important, it has been agreed upon that a separate memo report should be enclosed in the Budgets and Five-Year Plan financial report section restating direct investments (property and inventory) and respective ROI's to where division assets have been assigned to (or from) divisions that have received products from a producing unit.
58. The attached Exhibit B shows the use of the above coding system as far as job numbers, pay items, and cost codes. Exhibit C shows the accounts payable coding stamp which is stamped on vendor invoices for input into the system.
59. Approval for payment by the project manager is necessary before entry. We intend to take advantage of all discounts earned, and to pay all invoices by the due date to maintain good vendor relations. Invoices entered by noon one day can be paid the following day.

■ Organization

The sentences in this paragraph have been mixed up. Rearrange them in logical order.

1. After analyzing several possible causes, we've determined that the new Hangfree 1000 automatic door from the machine room into the west hallway fails to close properly after medium to heavy use.
2. Sometimes the open door is noticed. But usually the situation isn't discovered until the humidity level has risen to an unacceptable level.
3. Recently, the humidity level in the machine room has frequently risen higher than the acceptable limit, and our machines have malfunctioned.
4. When four or five people use the door in rapid succession, the door stays open, letting in the warm air from the west hallway.
5. But we need a better solution.
6. Now that we've determined the cause, our people are more aware of the sticking door and check it frequently.

The sentences in this paragraph have been mixed up. Rearrange them in logical order.

1. At present, each report must be dictated in its entirety.
2. It's also quite repetitious since 50 to 60 percent of each report contains information that repeats standard information common to each project.
3. As you know, our project managers dictate most of their routine reports.
4. This process is very time-consuming.
5. Our routine, repetitive reports could be stored in the computer.
6. We could cut this time and eliminate most of the repetitious dictation if we connected word processing units to our Premex 250 computer.
7. The transcriber could recall the stored report from the computer onto the word processor and insert the additional information.
8. Then our managers would only have to dictate the new material.
9. A detailed cost breakdown is enclosed.
10. I recommend that we purchase word processing units during the next quarter.

Point out the weaknesses in the following outlines:

I. Effects of the prolonged drought
    A. Damage to crops
    B. Loss of hydroelectric power
    C. Pollution of air by blowing dust
II. Increased danger of forest fires
    A. Possibility of increased use of coal for power production
        1. Amount available from strip mining

2. Amount available from underground mining
3. Amount available in the East
4. Amount available in the Plains States

——

I. Deterioration of Lake Wanningan
   A. Pollution from lakeshore homes
   B. Pollution from farm fertilizers
   C. Pollution above the narrows
   D. Pollution below the narrows

——

I. The Lowell Creek Route
   A. The problem of landslides
   B. The damage to value of nearby property
   C. The saving of two miles
   D. The better service to nearby communities
II. The Ridge Route for the new stretch of highway
   A. Advantages
      1. Better grade
      2. Ease of coping with snow
   B. Disadvantages
      1. Greater length
      2. Extreme amount of rock work

——

I. Advantages of the Electronic Funds Transfer System (EFTS)
   A. Personal benefits
      1. Eliminates banking trips
      2. Allows automatic bill payments
      3. Retailer benefits
         a. Banker benefits
      4. Permits credit card purchases
         a. Furnishes running inventory
         b. Causes of card misuse

■ Conciseness

Rewrite the following statements to make them simpler, clearer, and more direct. You may delete words, shorten or rearrange the parts, and/or simplify the vocabulary.

1. It was agreed this test will be conducted in November.
2. Before we can proceed, we need more up-to-date information.
3. Solutions were recommended by the programmers, as well as by the instructors.

4. Utilizing its cash position, the present Reed Division was acquired by Ace in 1976.
5. The payroll is prepared by the secretary from the attendance records.
6. The result would be a more orderly government securities market, which is of prime concern to the Treasury Department and this bank.
7. The following is a report indicative of my findings and recommendations.
8. It is not considered that a detailed report is necessary.
9. Until such time as we are able to review your records, there will be no consideration of bonuses.
10. We anticipate to be completed with the first phase of the performance enhancements by August 16, 1992.
11. Please feel free to contact myself or Gary Davis about any questions pertaining to our report.
12. I will be of assistance to you in any manner you request in this matter.
13. When designing new offices, there are many things the architect must consider.
14. Throughout the program there was little physical movement. There were times when he crossed his legs.
15. There is a chance that the hardware you ordered will not be ready until next week.
16. According to our files, we do not have any record of having received payment.
17. Met with Tom Strand to set priorities for tasks to be performed in the following order:
18. Through high school, she excelled in most subjects and was in high-level academic groups arranged for those students in the top ten percent of their class.
19. This budget will be consolidated and will show your total operations combined, meaning results in Rochester and in your profit centers.
20. If the occasion should arise, please do not hesitate to get in touch with us if we can be of assistance in similar circumstances.
21. We are pleased to inform you that the controversy has terminated and you have accomplished your objective of convincing us that your position in this matter is justified. Remuneration is enclosed. We appreciate your patience in this matter.
22. There will be a tour of the site Wednesday, April 1, from 9:00 AM to 11:00 AM for individuals attending the APhA convention. These individuals are members of the Nuclear Medicine Section of the APhA.
23. Lou Meyer and my main objective in seeing Baker was to explore or find out how and where we can help them in supplying material with this severe cutback in program analysts having taken place.
24. In addition to the problem solution, these sessions were used to present the programmers with the most efficient coding techniques, the easiest ADF rule generation processes, and the most productive test tools.
25. After an hour's worth of phone calls and a half day spent traveling, I discovered a new slide projector which I think might be perfect for us mainly because it can be used while the lights are on, which we know is a bonus, and it runs on batteries as well as is easy to carry because it is compact and lightweight.
26. The personality conflicts that may arise on the job are also factors which the Staff

Relations Assistant must mollify or eliminate through the execution of transfers (this being a realm of responsibility difficult to define because of its diversity and varying degrees of significance).

27. The contract, as amended, contains four tasks that have a limit as to the number of hours which can be expended by IBM. Beginning with this monthly report I will be providing the actual hours expended and the hours remaining for each task.
28. Also the performance of groups of estimators may be compared to see how our attendees in 1993 compared with 1994 attendees, compared with 1995 attendees, compared with a group of non-attendees (who have or will attend in 1996).
29. Several engineers have commented on the fact that having to deal with only one or two executives makes it easier for them to stay informed on what their status is with our department.
30. Jason remained seated during the observations, although it was noticed that when he did move it seemed to be slowly as though he was tired. This behavior was observed as Jason moved from his desk to different activities in the room.
31. Males are said to exhibit aggressive behaviors (physical and verbal aggressiveness) from childhood until death. When compared to females, males are said to be more aggressive.
32. Since the new federal regulations will not be finally approved until mid-June and the new performance standards will not be approved until sometime in July, it was determined that an interim review of both the test and the study manual will have to be done.
33. It is important to note that although the aforementioned testing and evaluation program reflects the best thinking of those departments directly responsible for this phase of the program it is felt to be an optimistic program based on limited knowledge of the equipment to be tested and its operating characteristics. Thus, as actual testing progresses, conditions may arise which will require more frequent and more intensive testing than now anticipated; this could conceivably extend the duration of Phase Two beyond the completion date of October. On the other hand, it is also possible that these experimental devices may perform so well that the testing and evaluation program could be significantly accelerated and completed sooner than now anticipated.
34. In your August 7 letter you state you are awaiting receipt of marked drawings from your field representatives at the job site in order to compare them with the marked prints which we sent to you under cover of our July 10 letter. In recent discussions with your field representatives it was established that any marked prints from them showing changes to date would be copies of drawings which are exact duplicates of our marked copies which are now in your hands. On this basis, there is no reason to wait for drawings from the field for comparison.
35. A meeting was held in New York in December attended by representatives of Standard Machines, Jones Company and Smith Bros. for the purpose of reviewing the letter dated November 4 sent by Mr. Thompson outlining the present situation in Washington with respect to the labor problem and the consequent need for the Jones Company to undertake extensive additional responsibilities as to the field activities in the case of the compressor as well as any further projects which may be assigned to them in connection

with the modernization program. After Mr. Wilson elaborated on the information contained in Mr. Thompson's letter, it was decided Mr. Brown should arrange to leave as soon as practicable for Washington to obtain firsthand information by survey of the local conditions concerning common and skilled labor, as well as facilities which the Jones Company would be required to furnish in order to carry out their field activities.

36. The benefits of being able to examine a more detailed long range forecast of expected expenditures and profits must in this case be examined in the light of the fact that the opportunities to personally meet various company personnel and discuss problems of both a particular and general nature have been substantially reduced. This problem is apt to be particularly pertinent to those carrying out the function of marketing where the opportunities for personal contacts and discussions with company personnel by means of personal trips to field offices is more limited than for those performing more technical functions.

37. In reviewing the current plant layout, discussion with Bob Smith focused upon more effective utility of seemingly dedicated space; for example, an engineering review might well prescribe a conveyor system which would remove currently staged packed goods to the warehouse area, potentially freeing up sufficient space to incorporate machinery in the production area now serving as storage for boxes, supplies and finished goods.

38. Dear Bill:

I have your letter of September 12 concerning the meeting on investments in the Pension Fund. I will be very happy to meet with you any time including Saturday morning. The only problem involved there is that our office is not open then and the person whom I would want to have sit in on this meeting would not be on hand here. Therefore a time during the week might be better.

There is another problem involved for this week and next week. Mr. Gordon is on his vacation this week, and I plan to be away next week, possibly until the following Tuesday. If you could make it here October 1,2, or 3, we could plan on meeting at that time. Please let me know if that will fit in with your time schedule.

Cordially yours,

39. The same procedures and reports will be used on the Monsanto project as are used internally for cost management purposes. Costs from all sources, such as accounts payable, equipment rental, warehouse charges and payroll, are coded with general ledger number, job number, cost code and pay item for entry into the computer system. Entries are accepted only if all numbers are complete and valid for the transaction being processed. All items are entered only once and accessed for all financial and cost reporting.

TONE

Jargon

Replace these expressions with plain, natural English.

acknowledge receipt of
anticipating your order
as captioned above
herewith enclose
assuring you of
as to your favor
at an early date
at the present time
at your convenience
attached herewith
awaiting your order
beg to advise
by return mail
carefully noted
contents noted
continued patronage
due to the fact
duly noted

herewith please find
if we can be of further service
it has come to our attention
regarding the above
in reply would advise
in the amount of
kind favor
kindly be advised
may we take the liberty
may we suggest
meets your approval
more than happy to
of above date
regarding said order
permit us to remind you
please be advised that
please return same
pleasure of a reply

herewith find
enclosed herewith
have before us
hereby advise
regret to advise
respectfully submit
take the liberty of
thanking you in anticipation
this writer
this is to acknowledge
this is to advise you
we are pleased to note
your future patronage
with your kind permission
pursuant to our recent conversation
of recent date
regarding the matter
regret to inform you
take pleasure in
thank you for your attention in this matter
thanking you in advance
finalizing the logistics for the October 4th strategic meeting
your prompt attention will be appreciated
we would wish to
under separate cover
we take pleasure in advising
we trust you will find the above satisfactory
your esteemed favor

Improve the tone by rewriting the following sentences in a simpler and more natural style.

1. In reply to your letter of recent date regarding the name of our dealer in Minneapolis, we wish to advise that the name of said dealer is S.L. Fair & Co., 945 South Broadway.
2. This is to acknowledge receipt of your letter dated February 15, enclosing copy of the lease we requested in ours of the 10th.
3. Kindly advise if said premises have been vacated by you as per our agreement and oblige.
4. We are in receipt of your check for $57.15 and wish to thank you for same.
5. Reference is made to your January account, payment for which has not yet been received by us.
6. It has been noted by us that you desire your mail to be addressed to your home in Teaneck.

7. Assuring you of our desire to be of service to you, we are

   Yours very truly,

Make the tone of the following statements more positive or courteous.

1. We have included no remote support subsystems.
2. We have included no mechanism to recover lost data.
3. Due to the moisture in the building and the sub-freezing temperature, we feel it would not be detrimental to delay installation.
4. You are hereby requested to supply us with the serial number which you will find on the casing.
5. We have your letter about the alleged loss of three stock certificates.
6. It is against our policy to accept goods for refund after ten days of purchase.
7. Please let us know if we have failed to answer all your questions.
8. Your letter neglects to say which of the two accounts should be credited with this payment.

■ Word Choice[9]

Replace each got *in the paragraph with another verb that expresses a more specific action. Keep the time in the past, and do not repeat any verbs.*

I got up this morning, got dressed, and got my instant breakfast. I got my coat and hat and got the elevator. I got a newspaper at the corner store and got the train. I got to my office and got the morning mail. I got an overdue bill from Con Edison. I got the adjustment manager on the phone and got the matter straightened out. At 10 o'clock, I got a cup of coffee and a doughnut. At 10:15, I got back to work. I got a call from my supervisor. We got together for lunch. I got a tuna sandwich and a cup of coffee. I got back at the office at 1:30 and got caught up on a lot of work. At 5 o'clock, I got my coat and got on the elevator and got the train and got home by 6 o'clock. All in all, I got a lot done today.

■ Sexist Language

Rewrite these sentences without sexist language.

1. Each director should edit his own documents.
2. Mr. Johnson gave every clerk a calendar for her desk.
3. The well-organized teacher makes her lesson plans a week in advance.

4. Each committee member announced the safety slogan chosen by his department.
5. A company lawyer should always give his advice in writing.

SYNTAX

■ Misplaced or Dangling Modifiers

Revise the following sentences to correct misplaced modifiers.

1. Turning the corner, a huge smokestack could be seen by the visitors touring the plant.
2. We found paint blemishes on two trailers that showed up only in daylight.
3. Janson told me frequently he had to dial my number three or four times.
4. When the teacher was helping, it appeared that Nadie could make the movements of cutting out paper for her age.
5. After reading about Joan's actions concerning her eating habits, it would be easy to assume Joan was a dependent person.
6. Upon return, the bill was paid.
7. The department manager noticed four unlabeled cartons inspecting the warehouse.
8. To receive the bonus gift, your order must be mailed before January.
9. By following these instructions carefully, your new bookshelf can be easily assembled.
10. It will also choose a forwarding destination based on line number for the inbound message.
11. Transaction IDs whose length without the slash is greater than four must be shortened.
12. In listening to such a negative dialogue, it became evident that the subject has adopted a perspective that inhibits her from achieving a positive view of herself.

■ Parallel Structure

Improve the following statements by coordinating their parts.

1. Check each account and making sure that each one is a good risk.
2. Thanks for your cooperation and services to the Purchasing Department.
3. Note: Each of these assignments should be 2-pages, APA format, and include deductive reasoning.
4. When she did talk, it was either to ask a question or in reaction to what her friend said.
5. With all of your data we can present these situations in terms of cost effective or in realization.
6. This presentation should include detailed examples, recommendations on mid-year change and needed restatements, how changes flow through the system and emphasize traceability of allocations.

7. The most economical methods for meeting current guidelines consist of a combination of lead shielding, methods changes and employee rotation to minimize exposure at key positions with higher activity levels.
8. They expect to have a general rate increase approximately July, 1992, which will include a change in the volume charge to industry as well as residential.
9. This article will briefly outline the steps an executive may take in (1) analyzing the present operations, (2) find the different data processing equipment applicable to his operations, and (3) the approach to be taken in determining whether an improvement in speed, cost, and in efficiency will result.
10. The purpose of our inquiry is to help devise a means of improved internal control, eliminating the duplication of records, provide better information, and it should facilitate audit review.
11. In many instances accountants are called upon to handle special work, such as trust accountings, maintenance of profit-sharing and pension fund accounts, a detailed audit of accounts receivable, cash receipts and disbursements, and there are many other such assignments requiring substantial detailed work.
12. The building had inadequate plumbing, cracked ceilings, the rooms were stuffy, and there was paint peeling in many places as well as on the exterior.
13. The improperly trained personnel who are often inadequate to carry out their functions efficiently, coupled with a lackadaisical attitude toward enforcement policies, indicate the need for a complete reorganization of the office.
14. The HP host performs two functions:
    A. Execute the unconverted EDJ applications;
    B. When an unconverted application must send a hand-to-hand message to a converted application, it will be modified to send to the appropriate predefined "station."
15. On screen and reports fields containing data elements are usually identified by common names preceding the data or used as column headers.
16. Grading criteria:
    Ability to define terms correctly
    Comprehensive answers
    Correct use of systematic observation technique chosen
    Correct use of traditional observation technique chosen
    Critical analysis of the outcomes observed
    Appropriate references
    APA format
    Writing mechanics
17. To be a good supervisor is maintaining a work balance between personnel levels by
    A. developing teamwork for finished products;
    B. encourage improvement;
    C. organize work schedules;
    D. ability to make decisions;
    E. delegate effectively;

F. records for analysis and reference;
G. communication skills; and
H. effective in cost reductions.

■ Split Infinitives

Revise the following sentences to correct the awkward placement of adverbs with an infinitive.

1. Every employee was given the mandate to earnestly strive for a better company image.
2. The manager told his staff to regularly practice.
3. The sergeant ordered the recruits quickly to march.

■ Agreement: Subject/Verb

Correct the sentences that have errors in agreement.

1. Either Jenkins or his boss in payroll are responsible for the overpayment.
2. Each of the managers write well.
3. Each of the women are sure they will be made the new manager.
4. Neither Lewis nor his lawyers were there.
5. Everybody had their work in good shape.
6. Either Red or I have won.
7. There was several mistakes in the monthly report.
8. One of the managers have moved to the Chicago office.
9. The smell of those fresh pastries make my mouth water.
10. The purpose of the procedures are to assure high quality work.
11. The progress of Jim's achievements on the job pleases his family.
12. Either of the two supervisors works well.
13. Bob and Jane opens the new office next week.
14. One of the new people are to be laid off.
15. Everyone was keeping their fingers crossed.

■ Agreement: Pronoun

Circle the pronouns that are in the wrong case. Some sentences are correct.

1. The trouble with my boss and I is that we're lazy.
2. The police thought they knew whom the vandal was.
3. Just between you and I, maintenance did it.
4. Sally went to the lobby with the Smiths and them.
5. It was he whom we saw walking away down the corridor.
6. Sarah can type better than him.

7. Fred Wall wanted to know who we had asked to preside.
8. The new personnel seemed to be avoiding Dave and I.
9. I can work longer than her, but she is as efficient as me.
10. We will provide a letter of introduction for whomever needs one.
11. Although he denies it, it was he who leaked the story.
12. Whom did he say is favored to get the bid?
13. I wasn't sure whom to trust.
14. No one would risk it but she.
15. Invite whoever is in town.
16. Send an invitation to whoever you like.

■ Who/Whom

Circle the correct form of the pronoun who.

1. Fred was among those (who/whom) finished in the first five minutes.
2. Marianne asked if Fred was the one (who/whom) I worked for.
3. You can pick (whoever/whomever) you choose, but I intend to decide (who/whom) gets chosen first.
4. It was his first vice-president (who/whom) put up the money for the project and the second vice-president (who/whom) the company admired.
5. (Who/Whom) should I say is calling?
6. You said that you would see anyone but (who/whom)?
7. Susan Shaw and a number of her associates (who/whom) we just met came down for a week.
8. It was he, (who/whom) under better circumstances I wanted to hire, (who/whom) got embarrassingly loud at the conference.
9. (Who/Whom) do you say I am?
10. He is the only one in (who/whom) we have absolute trust.
11. (Who/Whom) was it you invited to the interview?
12. Secretaries give their faithful attendance to (whoever/whomever) pay their salaries.

PUNCTUATION

If the following sentences contain an error in punctuation, correct it. If the sentence is correct, put a C in the blank.

1. _____ The woman, who had freckles all over her face, was the one awarded the prize.
2. _____ Dave Hill, John's favorite executive, was kind but firm with his subordinates.
3. _____ I am strong, but not brave.
4. _____ They like to go to the theater, but they never have the time.
5. _____ You will not get through the interview unless you study carefully.

6. _____ On Saturdays the office is open till noon.
7. _____ I didn't mean to be late for this morning's meeting, having set my alarm for 5:00; but it failed to go off.
8. _____ He is not just the best boss in the department; he is the best boss in the company.
9. _____ The delivery was brought to receiving, the supervisor often called to let us know.
10. _____ On Wednesday, the ice in the river began to break up.

Within each set, circle the letter of the sentence that is correctly punctuated.

1. A. There are two main sources of air pollution; automobiles and factories.
   B. There are two main sources of air pollution: automobiles and factories.
   C. There are two main sources of air pollution--automobiles and factories.
2. A. The Presidency is a killing job, nevertheless, it is highly coveted.
   B. The Presidency is a killing job; nevertheless, it is highly coveted.
3. A. They have a ten-year-old service contract and a five-month-old warranty on parts.
   B. They have a ten year old service contract and a five month old warranty on parts.
   C. They have a ten-year old service contract and a five-month old warranty on parts.
4. A. There were six supervisors at the bosses' meeting.
   B. There were six supervisors at the bosses's meeting.
5. A. That's the waitress' pencil.
   B. That's the waitress's pencil.
6. A. No one--except maybe Harry--would do such a thing.
   B. No one, except maybe Harry, would do such a thing.
7. A. Ann Marie, the second in command, will be there.
   B. Ann Marie--the second in command--will be there.
8. A. The testing program had six parts to it, but the operator did it in under an hour.
   B. The testing program had six parts to it but the operator did it in under an hour.
9. A. It was too noisy to hear the speaker so we left the meeting.
   B. It was too noisy to hear the speaker, so we left the meeting.
10. A. Can we go to Chicago, and still have time for a side trip to Rockford?
    B. Can we go to Chicago and still have time for a side trip to Rockford?
11. A. I'm taking a stapler, paper, and pencils, to the meeting.
    B. I'm taking a stapler, paper, and pencils to the meeting.
    C. I'm taking a stapler, paper and pencils to the meeting.
12. A. The manager who won the promotional was very excited.
    B. The manager, who won the promotional, was very excited.
13. A. It was then, that I discovered I was out of money.
    B. It was then that I discovered I was out of money.
14. A. Sandra Green who is no relation to the owner is an irresponsible technician.
    B. Sandra Green, who is no relation to the owner, is an irresponsible technician.
    C. Sandra Green, who is no relation to the owner is an irresponsible technician.
15. A. After the meeting, let's go out to dinner.
    B. After the meeting let's go out to dinner.

16. A. Walking and jogging, are two good forms of exercise.
    B. Walking and jogging are two good forms of exercise.
17. A. Indeed it made me extremely happy.
    B. Indeed, it made me extremely happy.
18. A. He is a compulsive, ostentatious, inveterate spender.
    B. He is a compulsive ostentatious inveterate spender.
    C. He is a compulsive, ostentatious, inveterate, spender.
19. A. She said, that she cannot come with us to the project site.
    B. She said that she cannot come with us to the project site.

AND NOTES ON...

■ Sentence Patterns

1. **Declarative sentences** make a statement:

   In 1978 the Customer Assistance Unit served 540 clients.

2. **Imperative sentences** give a command or make a request:

   Comply with federal regulations.
   Please contact me as soon as possible.

3. **Interrogative sentences** ask a question:

   Which agencies are cost efficient?

4. **Exclamatory sentences** express strong feeling:

   How her productivity has exceeded our expectations!

Classified by Structure

1. **Simple sentences** consist of one main verb or one independent clause but no subordinate clauses. For example:

   You are doing a fine job. Good work creates better work.
   Our Claims Unit has investigated and identified the problem.
   Customer Assistance and Counsel have investigated and identified the problem.
   The account systems engineers left for the day.

2. **Compound sentences** are composed of two or more independent clauses or two main verbs and two subjects but no subordinate clauses. The coordinating conjunctions that join them show that two or more ideas are equally important. For example:

   You're doing a fine job, and we're giving you a promotion.

   Coordinating Conjunctions:

   for, **and**, **nor**, **but**, **or**, **yet**, **so**
   (FANBOYS)

   Conjunctive Adverbs:

also	furthermore	nevertheless	therefore
besides	however	otherwise	thus
then	moreover	consequently	still

   Good business creates better business, and it challenges the intellect.
   Good business creates better business. Moreover, it challenges the intellect.

3. **Complex sentences** contain one independent clause and one or more dependent or subordinate clauses. For example:

   Although you're often late, you're doing a fine job.
   Good work, which creates better work, also challenges the intellect.
   Official billing will wait until the invoice comes.
   Before you can leave, you must verify your destination.

4. **Compound-Complex sentences** contain two or more independent clauses and one or more subordinate clauses--which can border on a run-on.

   Good work, which creates better work, is sometimes difficult, but it is also rewarding.

Classified By Pattern

Every sentence has two basic parts--a subject and a predicate. Within the subject (S) there may be a simple subject, commonly called the noun or the subject. Within the predicate there may be a simple predicate called the verb (V). Some sentences consists only of a simple subject and verb.

S V
Supervisors work.

Modifiers may be added to the subject and verb without changing the basic pattern of the sentences.

S V
Many supervisors from this plant work in the office on weekends.

Other subjects or verbs may be added to the subject and verb without changing the basic pattern of the sentences.

S S V
Many supervisors and division heads work in the office on weekends.

S S V V
Most supervisors and division heads meet before hours and leave late.

Noun-plus-modifier (or adjective) combinations may be treated as a complete subject unit. A pronoun may also be treated as a complete subject.

S V
We have an emergency.

S V
A potential client has arrived.

S V V
The growing demand for remote control console is clearly seen.

S V PHRASE
Strict limitations on the size of the database have been defined.

Certain additions to the predicate create other sentence patterns. These additions may be called complements, which complete the meaning begun by the subject and verb. The different kinds of complements produce patterns, and they may be distinguished by certain features. S means subject. AV means active verb. LV means linking (or helping) verb. IV means intransitive verb. DO means direct object. IO means indirect object. PN means predicate nominative or noun. PA means predicate adjective. OBJ COMP means object complement.

S AV IO DO PREP
Hewlett-Packard is sending (to) your company the new TK-140 model on Friday.

S AV
Secretaries type.

S AV DO DO
Secretaries type letters and memos.

S AV IO DO
The secretary sent (to) the Board of Trustees the report.

S AV DO OBJ COMP (ADJ)
This made the salaried staff happy.

S AV DO OBJ COMP (NOUN)
They made her director.

S LV PN
She is director.

S LV PA
He seems competent.

S IV
The sun sets.

S IV
The food tastes good.

Punctuation

Punctuation marks make writing clear. They tell readers when to stop or pause and when to note additional information. The period, comma, colon, question mark, and exclamation point (used judiciously) show that one thought ends and another begins.

Commas

- separate parts of a compound sentence
- separate two or more adjectives that describe the same noun
- separate three or more similar items that are listed together
- set off an introductory phrase or clause from the main part of the sentence
- set off extra, unessential information
- set off an expression that interrupts a sentence
- set off a direct quotation from the rest of the sentence
- close the greeting of an informal letter

Colons introduce an explanation, illustration, or a list. They close greetings in professional communications.

Semicolons separate parts of a compound sentence if the parts are **not** joined by **FANBOYS** (see below).

Apostrophes show possession or relationship. They also replace letters omitted in a contraction.

Dashes or a pair of dashes set off extra, unessential information.

Quotation marks indicate direct quotes. They indicate a colloquial or slang expression.

Hyphens show that several words function together. They also indicate that a word begun on one line continues on the next.

Parentheses separate unessential elements from the rest of a sentence. (Use judiciously.)

Brackets are used for mathematical and scientific expressions. They indicate unspoken but understood words within a quote; they show that an error occurred in an original quote.

Italics add emphasis to a particular word or phrase or a word used in a special way. They also indicate a foreign term.

■ Abbreviations/Acronyms

Writers should use abbreviations when they have a reasonable expectation that the abbreviations will be understood. Otherwise, we should state what the abbreviation means the first time the expression appears and show the abbreviated form in parentheses. Then we can use the abbreviation alone. For example, the abbreviations approx, lb, rpm, ft, cpu, blvd, IBM, ATT, and SOS are likely to be understood by a larger audience than abbreviations A, bbl, emf, Gy/s, and A/m.

Where highly technical terms must be used, our students should make a special effort to keep the surrounding language simple.

■ Numbers and Mathematical Expressions

Arabic Numerals are preferable in most business and professional contexts. To maintain consistency when writing Arabic numerals, use these guidelines:

1. Arabic numerals or digits should not be used at the beginnings of sentences. Numbers should either be spelled out or the sentences rearranged.
2. Use digits in text for numbers greater than ten. Numbers from one through ten should be spelled out. Where two or more numbers, some greater than ten, appear in one sentence, use digits exclusively, e.g., The stock included 11 capacitors, 8 tubes, and 27 feet of wire.
3. Spell out numbers in succession where confusion may occur, e.g., On August 12, eleven transformers burned out.
4. Spell out round number approximations, e.g., about thirty times a second; nearly three hundred.
5. A digit in parenthesis does not necessarily follow a spelled-out number, as in seven (7).

APPENDIX PART 2

QUESTIONS FOR THINKING[1]

1. **Memory/Factual Knowledge**. Questions require factual recall of material.
   - A. How much is X?
   - B. Who is X?
   - C. What is X?
   - D. When was X?
   - E. How did X?
   - F. Where is X?
   - G. Describe X?

2. **Comprehension**. Questions require students to think broadly, to explain in their own words, to show in-depth understanding.
   - A. Demonstrate the meaning of X.
   - B. Give an example of X.
   - C. How are the ideas similar to Y?
   - D. Explain the meaning of X.
   - E. Retell X in your own words.
   - F. What is the main idea of X?

3. **Application**. Questions ask students to apply learning to a new situation or to develop a product.
   - A. What would happen if X [changed]?
   - B. Apply the formula to the following problems:
     Teach your friend the meaning of X.
     Using your knowledge of Y, build an X.
     Using the story as a basis, write X.
     How is Y an example of X?
     How is it related to X?
     Why is it significant?

4. **Analysis**. Questions ask students to take the material apart and examine the pieces.
   - A. List the basic assumptions.
   - B. Name what is to be analyzed.
   - C. Gather enough information about it.
   - D. Describe the variety of motives.
   - E. Distinguish between theory and facts.
   - F. Separate the major and minor theories or themes.
   - G. Why are some parts important/essential?
   - H. What are the parts or features of X?
   - I. Explain how the parts relate to the whole.
   - J. Classify (sort) according to Y.

K. Outline/diagram/web X.
L. How does X compare/contrast with Y?
M. What evidence can you present for X?

5. **Synthesis**. Questions ask students to go beyond our present knowledge.
   A. Describe the three major theories, and show how they may be combined.
   B. Write an essay proposing a new solution to the problems of X.
   C. Write a play (paint a picture, perform a musical score, construct a formula, etc.) that best illustrates a new way to understand X.
   D. What would you predict/infer from X?
   E. What ideas could you add to X?
   F. How would you create/design a new X?
   G. What might happen if you combined with X?
   H. What solutions would you suggest for X?

6. **Evaluation**. Questions require students to evaluate ideas according to an explicit and detailed set of reasons. The system judgment employed must be clearly explained.
   A. Write a careful critique of X theory. Detail its strengths and weaknesses. Justify your conclusion.
   B. Evaluate the recent decision by X according to democratic versus expedient principles.
   C. Compare and contrast the approaches to X, according to the following [ethical] principles:
   D. Detail the logical inconsistencies in theory X as an example of an inadequate scientific paradigm.
   E. Do you agree/disagree? Why?
   F. What do you think about X?
   G. What is the most important?
   H. Put Y in priority according to X.
   I. How would you decide about X?
   J. What criteria would you use to assess X?

REPORTS, INFERENCES, JUDGMENTS

S.I. Hayakawa[2]

Reports

For the purposes of the interchange of information, the basic symbolic act is the *report* of what we have seen, heard, or felt: "There is a ditch on each side of the road." "You can get those at Smith's Hardware Store for $2.75." "There aren't any fish on that side of the lake, but there are on this side." Then there are reports of reports: "The longest waterfall in the world is Victoria Falls." "The Battle of Hastings took place in 1066." "The papers say that there was a smash-up on Highway 41 near Evansville." Reports adhere to the following rules: first, they are capable of verification; second, they exclude, as far as possible, inferences and judgments.

Verifiability

Reports are verifiable. We may not always be able to verify them ourselves, since we cannot track down the evidence for every piece of history we know, nor can we all go to Evansville to see the remains of the smash-up before they are cleared away. But if we are roughly agreed upon the names of things, upon what constitutes a "foot," "yard," "bushel," "kilogram," "meter," and so on, and upon how to measure time, there is relatively little danger of our misunderstanding each other. Even in a world such as we have today, in which everybody seems to be quarreling with everybody else, we still to a surprising degree trust each other's reports. We ask directions of total strangers when we are traveling. We follow directions on road signs without being suspicious of the people who put them up. We read books of information about science, mathematics, automotive engineering, travel, geography, the history of costume, and other such factual matters, and we usually assume that the author is doing his best to tell us as truly as he can what he knows. And we are safe in so assuming most of the time. With the interest given today to the discussion of biased newspapers, propagandists, and the general untrustworthiness of many of the communications we receive, we are likely to forget that we still have an enormous amount of reliable information available and that deliberate misinformation, except in warfare, is still more the exception than the rule. The desire for self-preservation that compelled men to evolve means for the exchange of information also compels them to regard the giving of false information as profoundly reprehensible.

At its highest development, the language of reports is the language of science. By "highest development" we mean greatest general usefulness. Presbyterian and Catholic, workingman and capitalist, East German and West German agree on the meanings of such symbols as $2 \times 2 = 4$, 100° C, HNO_3, 3:35 A.M., 1940 A.D., 1,000 kilowatts, Quercus agrifolia, and so on. But how, it may be asked, can there be agreement about even this much among people who disagree about political philosophies, ethical ideas, religious beliefs, and the survival of my business versus the survival of yours? The answer is that circumstances compel men to agree, whether they wish to or not. If, for example, there were a dozen different religious sects in the United States, each insisting on its own way of naming the time of the day and the days of the year, the mere necessity of having a dozen different calendars, a dozen different kinds of watches, and a dozen sets of schedules for business hours, trains, and television programs, to say nothing of the effort that would be required for translating terms from one nomenclature to another, would make life as we know it impossible.[3]

The language of reports, then, including the more accurate reports of science, is "map" language, and because it gives us reasonably accurate representations of the "territory," it enables us to get work done. Such language may often be dull reading: one does not usually read logarithmic tables or telephone directories for entertainment. But we could not get along without it. There are numberless occasions in the talking and writing we do in everyday life that require that we state things in such a way that everybody will be able to understand and agree with our formulation.

Inferences

The reader will find that practice in writing reports is a quick means of increasing his linguistic awareness. It is an exercise which will constantly provide him with his own examples of the principles of language and interpretation under discussion. The reports should be about first-hand experience-scenes the reader has witnessed himself, meetings and social events he has taken part in, people he knows well. They should be of such a nature that they can be verified and agreed upon. For the purpose of this exercise (not shown), inferences will be excluded.

Not that inferences are not important--we rely in everyday life and in science as much on inferences as on reports--in some areas of thought, for example, geology, paleontology, and nuclear physics, reports are the foundations; but inferences (and inferences upon inferences) are the main body of the science. An inference, as we shall use the term, is a statement about the unknown made on the basis of the known. We may infer from the material and cut of a woman's clothes her wealth or social position; we may infer from the character of the ruins the origin of the fire that destroyed the building; we may infer from a man's calloused hands the nature of his occupation; we may infer from a senator's vote on an armaments bill his attitude toward Russia; we may infer from the structure of the land the path of a prehistoric glacier; we may infer from a halo on an unexposed photographic plate its past proximity to radioactive materials; we may infer from the sound of an engine the condition of its connecting rods. Inferences may be carefully or carelessly made. They may be made on the basis of a broad background of previous experience with the subject matter or with no experience at all. For example, the inferences a good mechanic can make about the internal condition of a motor by listening to it are often startlingly accurate, while the inferences made by an amateur (if he tries to make any) may be entirely wrong. But the common characteristic of inferences is that they are statements about matters which are not directly known, made on the basis of what has been observed.

The avoidance of inferences in our suggested practice in report writing requires that we make no guesses as to what is going on in other people's minds. When we say, "He was angry," we are not reporting; we are making an inference from such observable facts as the following: "He pounded his fist on the table; he swore; he threw the telephone directory at his stenographer." In this particular example, the inference appears to be safe; nevertheless, it is important to remember, especially for the purposes of training oneself, that it is an inference. Such expressions as "He thought a lot of himself," "He was scared of girls," "He has an inferiority complex," made on the basis of casual observation, and "What Russia really wants to do is to establish a communist world dictatorship," made on the basis of casual reading, are highly inferential. We should keep in mind their inferential character and, in our suggested exercises, should substitute for them such statments as "He rarely spoke to subordinates in the plant," "I saw him at a party, and he never danced except when one of the girls asked him to," "He wouldn't apply for the scholarship, although I believe he could have won it easily," and "The Russian delegation to the United Nations has asked for A, B, and C. Last year they voted against M and N and voted for X and Y. On the basis of facts such as these, the newspaper I read makes the inference that what Russia really wants is to establish a communist world dictatorship. I agree."

Even when we exercise every caution to avoid inferences and to report only what we see and experience, we all remain prone to error, since the making of inferences is a quick, almost automatic process. We may watch a car weaving as it goes down the road and say, "Look at that drunken driver," although what we see is only the irregular motion of the car. I once saw a man leave a dollar at a lunch counter and hurry out. Just as I was wondering why anyone should leave so generous a tip in so modest an establishment, the waitress came, picked up the dollar, put it in the cash register as she punched up ninety cents, and put a dime in her pocket. In other words, my description to myself of the event, "a dollar tip," turned out to be not a report but an inference.

All this is not to say that we should never make inferences. The inability to make inferences is itself a sign of mental disorder. For example, the speech therapist Laura L. Lee writes, "The aphasic [brain-damaged] adult with whom I worked had great difficulty in making inferences about a picture I showed her. She could tell me what was happening at the moment in the picture, but could not tell me what might have happened just before the picture or just afterward."[4] Hence the question is not whether or not we make inferences; the question is whether or not we are aware of the inferences we make.

Judgments

In our suggested writing exercise, judgments are also to be excluded. By judgments, we shall mean all expressions of the writer's approval or disapproval of the occurrences, persons, or objects he is describing. For example, a report cannot say, "It was a wonderful car," but must say something like this: "It has been driven 50,000 miles and has never required any repairs." Again, statements such as "Jack lied to us" must be avoided in favor of the more verifiable statement, "Jack told us he didn't have the keys to his car with him. However, when he pulled a handkerchief out of his pocket a few minutes later, a bunch of keys fell out." Also a report may not say, "The senator was stubborn, defiant, and uncooperative," or "The senator courageously stood by his principles"; it must say instead, "The senator's vote was the only one against the bill."

Many people regard statements such as the following as statements of "fact": "Jack lied to us," "Jerry is a thief," "Tommy is clever." As ordinarily employed, however, the word "lied" involves first an inference (that Jack knew otherwise and deliberately misstated the facts) and second a judgment (that the speaker disapproves of what he has inferred that Jack did). In the other two instances, we may substitute such expressions as, "Jerry was convicted of theft and served two years at Waupun," and "Tommy plays the violin, leads his class in school, and is captain of the debating team." After all, to say of a man that he is a "thief" is to say in effect, "He has stolen and will steal again," which is more of a prediction than a report. Even to say, "He has stolen," is to make an inference (and simultaneously to pass a judgment) on an act about which there may be differences of opinion among those who have examined the evidence upon which the conviction was obtained. But to say that he was "convicted of theft" is to make a statement capable of being agreed upon through verification in court and prison records.

Scientific verifiability rests upon the external observation of facts, not upon the heaping up of judgments. If one person says, "Peter is a dead-beat," and another says, "I think so too," the statement has not been verified. In court cases, considerable trouble is sometimes caused by witnesses who cannot distinguish their judgments from the facts upon which those judgments are based. Cross-examinations under these circumstances go something like this:

Witness: That dirty double-crosser ratted on me.

Defense Attorney: Your honor, I object.

Judge: Objection sustained. (Witness's remark is stricken from the record.) Now, try to tell the court exactly what happened.

Witness: He double-crossed me, the dirty, lying rat!

Defense Attorney: Your honor, I object!

Judge: Objection sustained. (Witness's remark is again stricken from the record.) Will the witness try to stick to the facts.

Witness: But I'm telling you the facts, your honor. He did double-cross me.

This can continue indefinitely unless the cross-examiner exercises some ingenuity in order to get at the facts behind the judgment. To the witness it is a "fact" that he was "double-crossed." Often patient questioning is required before the factual bases of the judgment are revealed.

Many words, of course, simultaneously convey a report and a judgment on the fact reported.... For the purposes of a report as here defined, these should be avoided. Instead of "sneaked in," one might say "entered quietly"; instead of "politician," "congressman" or "alderman" or "candidate for office"; instead of "bureaucrat," "public official"; instead of "tramp," "homeless unemployed"; instead of "dictatorial set-up," "centralized authority"; instead of "crackpot," "holder of nonconformist views." A newspaper reporter, for example, is not permitted to write, "A crowd of suckers came to listen to Senator Smith last evening in that rickety fire-trap and ex-dive that disfigures the south edge of town." Instead he says, "Between 75 and 100 people heard an address last evening by Senator Smith at the Evergreen Gardens near the South Side city limits."

DIFFERENCES AMONG THE ARGUMENT, EXPLANATION, AND HYPOTHESIS

David Kelly[5]

Consider these two statements:

1. Joan will be successful because she is bright and ambitious.
2. Joan is sad because her cat just died.

Both of these statements make a claim about Joan, and both of them offer a reason, indicated by the word "because." But there's a difference: 1) is an argument, and 2) is an explanation. In 1) my claim that Joan will be successful is a conclusion, I'm trying to convince you to accept on the basis of the premise that she is bright and ambitious. In 2) I'm not trying to convince you that Joan is sad. We can both see that she's sad--I'm taking that fact for granted. Instead, I am trying to *explain* that fact by pointing out that her cat died.

The theoretical relationship between arguments and explanations is complex and controversial. But it seems clear that there is at least a difference in emphasis. The primary goal of an *argument* is to show that some proposition is *true*, while the primary goal of an *explanation* is to show *why* it is true. In an argument, we reason forward from the premises to the conclusion; in an explanation we reason backwards from a fact to the cause or reason for that fact.[6]

Ordinarily, the word "hypothesis" suggests something tentative, an idea that hasn't been proven yet. But we're going to use the term in a broader sense, to mean any explanatory idea, no matter how well confirmed. In this sense, for example, Newton's law of gravitation is a hypothesis when it is used to explain the motion of physical objects. Just as any argument involves premises and a conclusion, any explanation involves a hypothesis and an explanandum. When a doctor diagnoses a disease, the patient's symptoms are the explananda, and the diagnoses is the hypothesis. In a criminal trial, the prosecution tries to show that the guilt of the defendant is the only hypothesis that would explain all the evidence, and the defense tries to create doubt in the minds of the jury by arguing that some other hypothesis is possible.

If you are given the assignment of interpreting a poem, the explanandum is the poem itself--the words, the rhythms, the images. Your assignment is to find a hypothesis about what the poem was trying to convey. The theories of philosophers and religious thinkers can often be regarded as hypotheses to explain fundamental features of the world and human experience. And of course a central goal of science is to find hypotheses that will explain observable phenomena.

In order for an explanation to serve its purpose, there must be some logical relation between hypothesis and explanandum--just as there must be logical relation between premise and conclusion in an argument. Indeed, despite the difference between argument and explanation, there is also a fundamental similarity (see also Critical Thinking as Evaluating Statements, p. 440). An explanation has basically the same structure (though a different purpose) as an argument. In an explanation, reasons to a fact, event, or phenomenon to be explained--stand in much the same logical relationship as the premises of an argument stand to its conclusion.[7]

EXAMPLE OF WEAK STUDENT CASE STUDY

Observation of Tommy

I observed a three-year-old named Tommy. Tommy attends preschool five days a week. I observed a preschool child because social development and interaction with peers is important for children. The observation occurred over a three-day period. I observed Tommy for approximately twenty minutes. Through the observation, I gained different information about my subject in a preschool setting.

Social development, small motor skills, large motor skills, and miscellaneous are the four categories I included in my observation. Through these categories, I found that children learn muscle coordination, attentiveness, sharing and interacting with peers, and how a child uses his imagination.

Small motor skills consisted of building blocks, reading stories, coloring, and playing with other toys. During two time periods, a coloring activity occurred. It seems that Tommy's behavior suggests that he does not interact in group activities. During this time, he sat on the floor and read a book. I observed a continuous pattern in reading and during story time. Tommy's attention span was long during story time or individual reading.

During the first time period, I observed large motor skills. I found that Tommy's sight and muscle coordination was good; however, his attention span for listening and following directions was poor. The second time period large motor skills were used. During the third time period, his attention span increased with better listening abilities. It seems that one reason his listening abilities increased was due to the different activity utilized on the third day. I observed the difference in his attitude between both periods. His attitude during the first period seemed aggressive compared to his docile attitude during the second period.

Another example of small motor skills was free play. During free play, I noticed the active imagination in Tommy. While he sat at the table building blocks, I noticed the different way he played with them. Throughout two periods, he pretended to use the blocks as guns. He then ran around the room pointing the blocks at the other children.

I observed the importance of social development in the preschool setting. Throughout the three day period, Tommy played alone. During one period, he interacted with a girl. At first the interaction was positive; however, after ten minutes, I noticed a change in the scene after he took control of the situation. I observed the hostile aggression on Tommy's face as the girl went to play with another child.

Another observation in social development occurred during clean-up. As most of the other children cleaned up, Tommy wandered over to the book corner. There he sat on the floor reading a story. As the teacher pointed to him for clean-up, Tommy continued to read. This occurred during the first and second period. During the last period, Tommy had cleaned up the area where he was playing.

Under the miscellaneous category, I observed preparation for lunch. Due to the twenty-minute time period, I observed the first few minutes of lunch. Before lunch, the children sat quietly on the floor. During each period, Tommy wandered over to the book corner. He then returned with the same book he had read during the other time periods....

MODEL FOR DIAGNOSTIC EVALUATION[8]

Name:	Date of evaluation:
Address:	Date of birth:
Phone:	Age:
Parents' names:	Sex:
Referral source:	

1. Reports Sent to:

2. Identification

   Name, age, sex, parents, sibling order, school. For example:

   Jimmy is a four-year-old white male, the oldest of three children. Parents are separated, and Jimmy lives with his mother. He is enrolled at Happy Acres Nursery School and attends every morning.

3. History

   Summarize all the data on the client's history that you have obtained from such sources as the case history, a physician's or psychologist's report, informants (parent, foster parent, counselor, or anyone else who accompanies the client), or the client, in the case of an adult.

   Use separate paragraphs for each type of information, beginning with prenatal history and birth, including anything significant from the neonatal period, then motor development up to the present, then general health, and finally speech and language development. History extends up to the parents' or adult client's present concerns and description of the problem. (In previous report styles this contemporary information was entered under a section entitled "Chief Complaint.")

4. Behavioral Observations

   Describe the child's or adult's behavior or appearance when you first met him or her, and then describe how he or she acted in the room, that is, the degree of cooperation (separated easily and attended well throughout an hour of testing; cried loudly and asked that his mother return to the room; answered all questions readily and in detail, suggesting eagerness to receive assistance with this problem). Also, describe play behavior and other indicants of cognitive level, such as knowledge of colors and body parts. Indicate how valid you feel your observations are.

5. Test Results

Receptive Skills: Separate into paragraphs each bit of test information, with hearing test results appearing in the first paragraph. Then devote a separate paragraph to each receptive test you administered (discrimination, reception). For example:

> Joey's responses to pure-tone screening indicated normal hearing bilaterally. The Northwestern Syntax Screening Test (NSST), receptive portion, was administered to assess Joey's understanding of English syntax and morphology. (Or, this test uses a picture-pointing response to assess a child's understanding of English syntax and morphology.) Joey responded correctly to 17 out of 40 possible items, placing his performance in the N percentile (don't abbreviate "percentile") for normal children ages 4-10 to 4-11.

Incorrect responses were noted for the following syntactic elements; regular past tense, *who* versus *what*, etc.

Expressive Skills: Here, enter the results of the oral peripheral examination in this order: articulation test results, including your own perception of intelligibility in conversation; expressive syntax test; voice quality; fluency and rate; an overall indication of expressive ability or characteristics. Regardless of the presenting problem, assess all areas of communication and describe your findings here. Some examples:

> An oral peripheral examination indicated normal structure and function.
> **Not**: The oral peripheral examination was normal (the child's mouth was normal, not the examination).
> **Or**: Although oral structures appeared normal, movement was slow, as indicated by the following oral diadochokinetic rates: /p /--t in 5 seconds; /t /--4 in 5 seconds; /k --2 in 5 seconds. The three-syllable utterance /p t k was not produced in order, suggesting poor (or inadequate) oral sequencing skills. These voiceless stop plosives were produced with inadequate intraoral pressure, as well, suggesting reduced strength in the oral structures.

The *Goldman-Fristoe Test of Articulation* was administered to assess single-word articulation ability. The following phoneme errors were noted:

Initial	Medial	Final
n/g	d/g	-/g

An indication of distinctive feature errors is then in order. For example, articulation errors were characterized, in general, by the use of stops for fricatives and reduction of all phoneme blends that incorporated /s/, /1/, and /r/. Then say something like this: Despite the large number of phoneme errors noted on this test, intelligibility in conversation was fair, even when the topic was not known to the clinician.

If the presenting problem is fluency, present the fluency rate for each context in which you obtained speech samples. For example:

Context	**Fluency**
Counting	90%
Reciting	75%

Then, describe the dysfluency pattern, noting whole- or part-word repetitions, interjections, blocks on initial phonemes, etc., and secondary symptoms, such as foot tapping and eye blinking.

Psycholinguistic Skills: Interpret your ITPA results here in terms of significant deviations from mean or median scale scores, noting apparent areas of strength and weakness.

6. Summary and Recommendations

The first paragraph is a summary of all pertinent information obtained during the evaluation. Start out like this: Joey is a three-year-old boy who is the oldest son of May and Ralph Smith. The family brought him to this center because of their concern with the unintelligibility of his speech. Test results and observations indicate that receptive language skills and expressive syntax are at age level. Articulation skills are poor, however, resulting in poor intelligibility. Joey is quite stimulable [sic], though, for most error phonemes and attended well in the therapy setting.

Or, Joey's speech is characterized by multiple consonant substitutions and vowel distortions rendering conversational speech nearly unintelligible.

It is recommended that Joey receive articulation therapy for two half hours weekly. Prognosis for improvement is good, since Joey's other language skills are at age level, and he can produce several phonemes with stimulation at this time.

The single long-range therapy goal for this child is the attainment of age-appropriate phonological skills. Specific short-term therapy goals will be established after probe procedures have been completed.

Name
Graduate Student
Clinician

AUDIENCE[9]

Level	Definition	What They Read	What They Write
1	Those who know less than you: e.g., high school students, children	*Reader's Digest, National Enquirer;* books for sale at K-Mart; books advertised on TV	Usually they avoid it and send greeting cards.
2	People who know the same as you: e.g., the generally educated public	*The New York Times;* Book of the Month Club Selections; *Psychology Today; Scientific American*	They write papers in college and memos and reports in the real world.
3	People who know the same as you about a specialized field, e.g., psychology majors	Books that the well-educated purchase at good book stores, higher quality but still on the coffee table	They write books for Level 2.
4	People who know more than you about a specialized field e.g., operant conditioning	*London Times; New York Review of Books*; special orders from book stores; anything that calls itself a journal	They write journal articles to each other. The books have to be special ordered.

WHAT IS STRESS?

Hans Selye[10]

Everybody has it, everybody talks about it, yet few people have taken the trouble to find out what stress really is. Many words have become fashionable, when scientific research revealed a new concept likely to influence our way of thinking about major issues of life or to affect our everyday conduct. Such terms as "Darwinian evolution," "allergy," and "psychoanalysis" have all had their peaks of popularity in drawing-room or cocktail-party conversations; but rarely are the opinions about them based on a study of technical works written by the scientists who established these concepts.

Nowadays, we hear a great deal at social gatherings about the stress of executive life, retirement, exercise, family problems, pollution, air traffic control, or the death of a relative. But how many of those defending their strong convictions about these matters with heated arguments have bothered to learn the scientific meaning of stress and the mechanism of its workings? Most people have never even wondered whether there is a difference between stress and distress!

The word "stress," like "success," "failure," or "happiness," means different things to different people, so that defining it is extremely difficult although it has become part of our daily vocabulary. Is stress merely a synonym for distress? Is it effort, fatigue, pain, fear, the need for concentration, the humiliation of censure, the loss of blood, or even an unexpected great success which requires complete reformulation of one's entire life? The answer is yes and no. That is what makes the definition of stress so difficult. Every one of these conditions produces stress, but none of them can be singled out as being "it," since the word applies equally to all the others.

Yet, how are we to cope with the stress of life if we cannot even define it? The businessman who is under constant pressure from his clients and employees alike, the air-traffic controller who knows that a moment of distraction may mean death to hundreds of people, the athlete who desperately wants to win a race, and the husband who helplessly watches his wife slowly and painfully dying of cancer, all suffer from stress. The problems they face are totally different, but medical research has shown that in many respects the body responds in a stereotyped manner, with identical biochemical changes, essentially meant to cope with any type of increased demand upon the human machinery. The stress-producing factors--technically called stressors--are different, yet they all elicit essentially the same biological stress response. This distinction between stressor and stress was perhaps the first important step in the scientific analysis of that most common biological phenomenon that we all know only too well from personal experience.

But if we want to use what the laboratory has taught us about stress in formulating our own philosophy of life, if we want to avoid its bad effects and yet be able to enjoy the pleasures of accomplishment, we have to learn more about the nature and mechanism of stress. In order to succeed in this, in order to arrive at a basis for a scientific philosophy of conduct--a rational prophylactic and therapeutic science of human behavior--we must concentrate in this somewhat difficult first chapter on the fundamental technical data which the laboratory has given us.

In writing this book, it seemed logical to begin with what the physician means by the term stress, at the same time familiarizing the reader with the few technical expressions that are essential.

Stress is the nonspecific response of the body to any demand made upon it. To understand this definition we must first explain what we mean by nonspecific. Each demand made upon our body is in a sense unique, that is, specific. When exposed to cold, we shiver to produce more heat, and the blood vessels in our skin contract to diminish the loss of heat from the body surfaces. When exposed to heat, we sweat because the evaporation of perspiration from the surface of our skin has a cooling effect. When we eat too much sugar and the blood-sugar level rises above normal, we excrete some of it and burn up the rest so that the blood sugar returns to normal. A great muscular effort, such as running up many flights of stairs at full speed, makes increased demands upon our musculature and cardiovascular system. The muscles will need supplemental energy to perform this unusual work; hence, the heart will beat more rapidly and strongly, and the blood pressure will rise to dilate the vessels, thereby increasing the flow of blood to the muscles.

Each drug or hormone has such specific actions: diuretic drugs increase the production of urine; the hormone adrenalin augments the pulse rate and blood pressure, simultaneously raising blood sugar, whereas the hormone insulin decreases blood sugar. Yet, no matter what kind of derangement is produced, all these agents have one thing in common: they also increase the demand for readjustment. This demand is nonspecific; it requires adaptation to a problem, irrespective of what that problem may be.

In other words, in addition to their specific actions, all agents to which we are exposed also produce a nonspecific increase in the need to perform adaptive functions and thereby to re-establish normalcy. This is independent of the specific activity that caused the rise in requirements. The nonspecific demand for activity as such is the essence of stress.

From the point of view of its stress-producing or stressor activity, it is immaterial whether the agent or situation we face is pleasant or unpleasant; all that counts is the intensity of the demand for readjustment or adaptation. The mother who is suddenly told that her only son died in battle suffers a terrible mental shock: if years later it turns out that the news was false and the son unexpectedly walks into her room alive and well, she experiences extreme joy. The specific results of the two events, sorrow and joy, are completely different, in fact, opposite to each other, yet their stressor effect--the nonspecific demand to readjust herself to an entirely new situation--may be the same.

It is difficult to see how such essentially different things as cold, heat, drugs, hormones, sorrow, and joy could provoke an identical biochemical reaction in the body. Nevertheless, this is the case; it can now be demonstrated, by highly objective quantitative biochemical determinations, that certain reactions are totally nonspecific, and common to all types of exposure.

It has taken medicine a long time to accept the existence of such a stereotyped response. It did not seem logical that different tasks, in fact any task, should require the same response. Yet, if you come to think of it, there are many analogies in everyday life in which highly specific things or events share the same nonspecific feature. At first sight it is difficult to see what could be the common denominator between a man, a table, and a tree, yet they all have weight. There is no object completely devoid of weight: the pressure exerted on the scale balance does not depend upon such a specific feature as temperature, color, or shape, any more than the stressor effect of a demand upon the body depends on the kind of adaptive reaction that is required to meet it.

What Stress Is Not

Since the term "stress" is often used quite loosely, many confusing and contradictory definitions of it have been formulated; hence, it will be useful to add a few remarks stating clearly what it is not.

Stress is not merely nervous tension. This fact must be especially emphasized, since most laymen and even scientists tend to identify biological stress with nervous exhaustion or intense emotional arousal. Indeed, quite recently, Dr. John W. Mason, a former president of the American Psychosomatic Society and one of the most distinguished investigators of the psychologic and psychiatric aspects of biological stress, devoted an excellent essay to and analysis of my stress theory. He suggested that the common denominator of stressors may simply be activation of "the physiological apparatus involved in emotional or arousal reactions to threatening or unpleasant factors in the life situation as a whole." In man, with his highly developed nervous system, emotional stimuli are in fact the most common stressors--and, of course, these would be encountered most frequently in psychiatric patients.

It must not be forgotten, however, that stress reactions do occur in lower animals that have no nervous system, and even in plants. Furthermore, the so-called stress of anesthesia is a well-recognized phenomenon in surgery, and numerous investigators have tried to eliminate this undesirable complication of the loss of consciousness.

Stress is not always the nonspecific result of damage. We have seen that it is immaterial whether a stressor is pleasant or unpleasant; its stressor effect depends merely on the intensity of the demand made upon the adaptive capacity of the body. Any kind of normal activity--a game of chess or even a passionate embrace--can produce considerable stress without causing harmful effects. Damaging or unpleasant stress is "distress."

The word "stress" allegedly came into common English usage, via Old French and Middle English, as "distress." The first syllable eventually was lost through slurring, as children turn "because" into "cause." In the light of our investigations, the true meaning of the two words became totally different despite their common ancestry, just as in correct usage we distinguish between "because" (since) and "cause" (reason). Activity associated with stress may be pleasant or unpleasant; distress is always disagreeable.

Stress is not something to be avoided. In fact, it is evident from the definition given at the beginning of this chapter that it cannot be avoided.

In common parlance, when we say someone is "under stress," we actually mean under excessive stress or distress, just as the statement "he is running a temperature" refers to an abnormally high temperature, that is, fever. Some heat production is essential to life.

Similarly, no matter what you do or what happens to you, there arises a demand for the necessary energy required to maintain life, to resist aggression and to adapt to constantly changing external influences. Even while fully relaxed and asleep, you are under some stress. Your heart must continue to pump, your intestines to digest last night's dinner, and your muscles to move your chest for respiration. Even your brain is not at rest while you are dreaming. Complete freedom from stress is death.

CHECKLIST FOR ANALYZING ARGUMENTS[11]

■ Step 1 Paraphase

A. Restate the argument in different words.
Is there a special context?
Is there more than one plausible interpretation?
Are there strongly connotative words?
Are there problems of scope?
Do any of these function importantly in the argument?
B. Check the paraphrase for accuracy.
Does it make the premises (reasons) obviously true or obviously false?
Does it match the original?

■ Step 2 Break the argument down into premises and conclusions

A. Determine if it is an argument.
Is the arguer trying to prove anything by giving reasons?
B. Identify the conclusion.
Is there a special context?
Is there more than one conclusion?
C. Identify the premises. Consider each sentence that is not the main conclusion.
Is it being given as a reason or is it irrelevant?
Does it contain more than one independent claim?
Number the premises in the order of occurrence.

■ Step 3 Arrange the premises and conclusions in their logical order

A. Draw arrows between a statement and what it supports to form subarguments.
Which premises are supported by other premises?
Which statements are unsupported?
Which premises most closely support the conclusion?
B. Fit the subarguments together.
Are all relevant premises included?
Is the argument vertical, horizontal, or a mixture?

Step 4 Fill in the missing premises needed to make the argument valid

A. Determine the validity of each important subargument.
   Can you imagine the scenario in which the premises would be true and the conclusion would be false?
   Is some part of the conclusion not covered by a premise?

B. Fill in the missing premises in each invalid subargument.
   Good missing premises must fulfill these conditions:
   - They must make the argument valid.
   - They must be principles that the arguer could have used to reason from those premises to that conclusion.
   - They must be general enough to be a guiding principle in the arguer's reasoning.
   - They must be related to the particular details of the argument.
   - They must be expressed in a clear comprehensible way.

Step 6 Evaluate the argument

A. Validity. If there is no missing premise that meets the three conditions, then the argument can be criticized as unsound because it is invalid.

B. Truth.
   Consider each premise, starting at the top of the logical arrangement:
   - What reasons are there in favor of it?
   - What reasons are there against it?
   - Is it true or false?
   - Continue until you have evaluated all the premises.
   - Are all the essential premises true? If not, the argument is sound.

THUMBNAIL HISTORY AND SYSTEMS OF CRITICAL THINKING

We can take Classical Greek philosophy as a starting point for critical thinking. Plato emphasized the wholly mental process of rational analysis as the goal of truth to which all dialectic was directed; Aristotle emphasized the theoretical thinking characteristic of philosophers pursuing the why of things in their largest sense. But to a certain extent Aristotle was also a pragmatist and empiricist. The very reality-based material and logical fallacies are based in Aristotle's work; conventional or formal logic (syllogistic thinking, the enthymeme, etc.) are also associated with things political, forensic, and ceremonial. Aristotle also gave considerable thought to practical thinking, characteristic of artisans and others whose social task was to get things done.

Among those in the twentieth century who shared Aristotle's philosophical preoccupation with the workings of the mind were psychologist Vygotsky with his notion of concept development, Piaget with his constructs of logical operations, and Newell and Simon with their theories of symbolic problem solving.[12] Piaget's work was in the case study tradition which he especially invoked to theorize about developmental cognitive structures. For example, he suggested that a small number of primary cognitive processes (that is, whole/part, classification/hierarchy, cause/effect, and sequence) forms the basis of any activity of the mind. In the late 1950s, Inhelder and Piaget described the development of abstract, systematic, and hypothetical reasoning as evidenced in scientific problem solving. Piaget hypothesized three fundamental principles: 1) development is a progression from action-based, concrete "operations" or schemas to abstract, systematic, logical, strictly mental operations; 2) assimilation refers to the fitting of intellectual material into predetermined mental schemas; and 3) accommodation refers to the changes that take place in cognitive structures as a result of processing unfamiliar intellectual material.

Up until recently college-level critical thinking instruction has resided largely in philosophy departments, in which every statement is basically an argument: serial, linked, convergent, and divergent[13] --which students have difficulty detecting. However, the critical thinking movement has turned from an emphasis on formal logic and linguistic analysis toward informal logic or the application of principles of reasoning to everyday situations. Modern thinkers are indeed concerned with the kind of thinking that allows us to solve not only the cerebral but also the practical problems of life.

Critical thinking these days stresses real-life, language-bound argumentation. It is an attempt to bring some rigor to the study of thinking as it functions in the world of purposeful activities in which people customarily engage. This changing emphasis within philosophy has promoted interdisciplinary coordination of critical thinking studies with language and, not surprisingly, rhetoric.

Recently rhetorician Fulkerson[14] has favored the complete, sequential, and elegant system of arguments based on stasis theory--which identifies the kinds of issues that arguments can involve. Fulkerson constructs his own taxonomy of issues: substantiation, evaluation, and policy. A substantiation argument needs evidence. An evaluation argument needs criteria related to how it fulfills its purpose--which may or may not need defending. The policy argument is most demanding and considered standard--it being a conflation of fact/definition and causality. For all intents and purposes, questions of policy ask should we or shouldn't we do X?[15]

From a contemporary perspective, philosopher Toulmin's influential theory identified six basic elements found in arguments on any subject, in any field: He called the conclusion in traditional terminology a *claim*; the premises became *data* or *grounds* on which the claim rests. The relationship between the claim and the data is expressed in a *warrant*, often an unstated premise. *Backing* is often needed to justify the warrant in an informal argument. In addition, the *modality* of an argument is expressed by qualifiers that indicate the force or intensity with which the claim is asserted. An argument may also contain a *rebuttal* or statement of exceptions or conditions under which the warrant might not hold true. The outcomes of a critical inquiry are twofold: 1) a conclusion (or hypothesis); and 2) the justification offered to support it. These outcomes are usually set forth in the form of an argument, defined as "the sequence of interlinked claims and reasons that, between them, establish the content and force of the position for which a particular speaker is arguing."[16]

■ Creative and Critical Thinking

The word *think* comes from the root *ofrm skeri*, which means to cut or separate; thus, the original idea conveyed by the word was to take something apart or to analyze it. Thinking may be divided into the creative and the critical, although complex thinking activity usually involves both aspects in varying amounts.[17]

In their pure form, creative mental activities refer to generating ideas (whether completely new or information reproduced from memory), elaborating information or ideas, transforming information in thought, and combining or recombining thought contents. There is a feeling for the whole, an unwillingness to accept automatically things as they seem to be, and a playfulness or flexibility with ideas, objects, and language.[18] The creative aspect of thinking allows us to generate new ideas, possibilities, and options.

In contrast, critical thinking calls into question the assumptions underlying our customary ways of thinking and acting and then prepares us to think and act differently on the basis of critical questions.[19] The critical aspect of thought allows us to recognize, understand, try out, test, and verify our mental products. The term, *critical*, is also related to the Greek word *kriterion*, which means a standard for judging. Putting together these ideas, we see that the word critical may refer to analyzing on the basis of a standard. Thus, critical thinking is consciously observing, analyzing, and evaluating information according to criteria.[20] These evaluative activities focus on manipulating products generated by previous thinking (either our own or that of others).

A recent California state universities' executive order[21] reads as follows:

> Instruction in critical thinking is to be designed to achieve an understanding of the relationship of language to logic, which should lead to the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief. The minimal competence ... expected ... after successfully completing instruction in critical thinking should be the ability to distinguish fact from judgment, belief from knowledge, and skills used in elementary inductive and deductive processes, including an understanding of the formal and informal fallacies of language and thought.

While in 1967 Guilford divided thinking into 120 separate intellectual operations which humans perform when processing information, dictionaries tell us that we use the word, thinking, to mean at least 19 different mental operations. These range from reasoning to solving problems, to conceiving and discovering ideas, to remembering, to day-dreaming. Some of these forms are conscious, focused and directed, while others are unconscious or automatic.

■ Models of Critical Thinking[22]

The **Quantity** model generates a number of ideas asking students to avoid evaluating these ideas until all possibilities are produced.

The **Viewpoint** model asks students to be flexible in their thinking by looking at events or situations from several points of view.

The **Involvement** model encourages students to use associative thinking by drawing analogies between their personal observations and other situations.

The **Conscious Self-Deceit** model places students in a position to trick themselves into discussing issues and ideas not previously considered.

The **Forced-Association** model encourages students to relate unlike experiences, people, or issues to those situations commonly known or understood.

The **Reorganization** model asks students to imagine that something is true which is not true or that something occurred which did not occur in order to consider the consequences.

■ Critical Thinking as Problem Solving[23]

Critical thinking may be characterized by the ways in which the contents and mechanisms of the intellect are used in solving problems and making decisions and judgments.[24] Unlike ordinary problem solving, in critical thinking the goal is not to find and execute a solution but to construct a "plausible representation" of an issue that may be argued convincingly.[25] Much of the cognitive process research on problem solving has been conducted in well-structured domains such as chess, geometry, physics, and artificial intelligence. Such well-defined problems are characterized by clearly delineated problem statements and goal statements and known means of solution (though not necessarily to the problem-solver).[26]

Apart from the academic social sciences, classroom problem solving is often narrow in scope, self-contained, and almost entirely decontextualized. But critical thinking in reality involves reasoning about open-ended and poorly structured problems. They often have no one right or best solution, as they might in a pure class situation. Everyday problems depend on and interact with the environment of which they are a part. In the everyday world, it is usually not clear just what information is needed to solve a problem. Nor is it always clear where that information may be found. Furthermore, we rarely create such problem-solving schema from scratch. As we would expect, prior knowledge--declarative, procedural, and normative--affects all subsequent knowledge acquisition and organization as well as comprehension, reasoning, and critical thought. And the solutions to everyday problems depend at least as much on informal knowledge as on formal knowledge. The nature of social problems and goals are sometimes ambiguous or at issue, and the means of resolution are unknown or disputed. The steps in problem solving typically proceed like this:

1. What is the problem? What makes it a problem? What are the clues? Who has the problem? What are some examples of it? How can I state the problem? Or, why must it be solved? When must it be solved?
2. What are the boundaries? What results am I aiming for? What are alternative solutions?
3. What are the advantages and/or disadvantages of each alternative? What additional information do I need?
4. Which alternative(s) should I pursue? What steps will I take? How can I review and adjust my strategies?

■ Critical Thinking as Decision Making

In this perspective critical thinking is the "use of intelligence in making decisions"[27] as a guide for a belief or responsible action. In 1970 William Perry proposed nine stages in cognitive and motivational development starting with Dualism (3 stages), proceeding to Relativism (3 stages), and ending with Committed Relativism (3 stages). Dualistic thinkers believe that their parents, teachers, or superiors are authority figures who inform them of facts and beliefs, and their role is to internalize them and respond correctly. Such individuals exhibit an external locus of control in that they believe their learning is controlled by some sort of superior, and they are the passive recipients of that knowledge. Relativistic thinkers respect the idea that there are multiple realities in human experience. They commit to a world view as well as continually remain open to the wisest choices, given a particular time and situation.[28]

■ Critical Thinking as Context and Value-Bound Decisions

Traditionally critical thinking has been presented as discrete skills or a series of steps, implying a linear process. Critical thinking skills and patterned combinations of them are assumed to be generalized and knowledge-free, transferable across disciplines. This "received view" of critical thinking as a collection of generic skills reflects a "tendency to reify the sort of items listed in B.S. Bloom's taxonomy,"[29] which promotes intersubjectively the discovery of what we should believe.

Educators are generally reluctant to encourage moral and ethical deliberation in their classrooms,[30] yet it is difficult to avoid questions of values when teaching critical thinking. No context (even that of the supposedly "value-neutral" scientific method) is free of value assumptions, despite the problematic nature of values and ethical deliberations in the curriculum.[31] Moreover, increasing evidence indicates that the development of critical thinking and its associated skills are highly knowledge dependent.[32] In contrast to the kind of academic thinking exemplified by a single overarching algorithm to solve all problems of a given type, this form of critical thinking emphasizes the situation in which argumentation occurs.

This fundamental orientation holds that cognitive skills take shape in the course of individual participation in socially organized practices--echoing the classic sophistic notion that language is "fitted to the occasion" or socially constituted. Critical thinking here is a social as well as a cognitive activity, shaped by the setting and the norms of the community in which it occurs. Skilled practical thinking is goal-directed but varies adaptively with the changing properties of problems and changing conditions in the task environment.

The reasoning follows: How can we grasp the meaning of a statement and reasonably make judgments about it without knowledge of its subject area context? Unless we are knowledgeable about biology, how are we to employ those purportedly generic skills to think critically? To impose the standards of one field on another is misguided because each area of knowledge has its own distinctive logic; the criteria or expectations for critical thinking vary from one to another; consequently, separating subject matter content and critical thinking is a mistake.

This view is clearly associated with paradigmatic distinctions. A paradigm is a world view or framework of knowledge and belief through which we "see" and investigate the world. Scientific paradigms consist of working assumptions about the world and how it is to be studied, understood, and acted on. Commitment to a particular scientific paradigm involves affiliation with a community of scholars who shape, share, and sustain the paradigm. Critical thinking thus must vary with the domain investigated and the paradigm adopted.

■ Semiosis: The Triadic Relation

An elaboration of this tradition may be found in the work of philosopher Peirce. Unlike practitioners of conventional logic, Peirce claimed that we should abandon any hope of knowing that something is true once and for all and be satisfied with the idea that we can only be certain about something for the time being. Peirce maintained that the process of settling doubt and fixing belief is accomplished through deliberate and self-controlled thoughts or metacognition. Peirce called this process reasoning.[33] This is what scientists try to do: establish a match between their descriptions of the world and the world as an object. Both semiosis and inquiry are part of such logic.

Semiosis begins with Peirce's definition of a sign: "A sign is something which stands to somebody for something in some respect or capacity." [34] It forms a triad. In other words, the significance of a triadic as opposed to dyadic relation is that the representation of the object and the interpretation of the object are not coupled in one relationship.

The implications of semiosis for critical thinking is first that semiosis shows that our knowledge of the world is mediated. Second, the triadic nature of the sign suggests that meaning is not reducible to the sum of its parts. Third, signs generate interpretants which point to something other than what the sign represents, suggesting that sense-making is distinctly human, involving the creation of new ideas. (We take sense-making for granted, at least until we encounter something that doesn't make sense.)

■ Critical Thinking as Reflective Thinking/Skepticism

Because we don't usually think about how we make sense of our world, problems arise when individual/social/cultural artifacts are perceived as inconsistent with one another, as clashing in some way, when individuals discover that something in the world doesn't fit their conception of it.[35] Dewey believed that thought involved dissonance, a sense of incongruity; the individual's task was to "transform a situation in which there is experienced obscurity, doubt, conflict, disturbance of some sort, into a situation that is clear, coherent, settled, harmonious."[36]

In this perspective, we do not take perceptions for granted. We know that we live in a world of signs. We approach it with skepticism. The essence of critical thinking is informed skepticism, a trusting, yet questioning orientation to the world. It is active inquiry rather than passive acceptance of tradition, authority, or common sense. One who thinks critically does not take the social world as a given or accept it at face value.[37] Critical thinking is, therefore, a dynamic process of questioning and reasoning, of raising and pursuing questions about our own and others' claims and conclusions, definitions and evidence, beliefs and actions.[38]

The second construct, reflection, allows us to consider various explanations for these experiences. Dewey defined reflective thinking as the "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends [that] includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality."[39] In 1933 Dewey argued that reflective thought is not identical to the signifying function (semiosis). The rational problem solver pauses to formulate the problem and develop a hypothesis. Observation and reason guide testing and refinement of the hypothesis [40] that involves:

1. a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates; and
2. an act of searching, hunting, inquiring, to find material that resolves the doubt, settles and disposes of the perplexity.[41]

Reflective thought is composed of five phases:

1. a suggestion phase, in which the mind leaps forward to a possible solution;
2. an intellectualization of the difficulty or perplexity that has been experienced into a problem to be solved, a question for which the answer must be sought (A question well-put is also located in time and space; a question well-put, he maintains, is half-answered.)[42];
3. the use of one suggestion after another as a leading idea or hypothesis, to initiate and guide observation and other operations in collecting factual material;
4. the mental elaboration of the idea or supposition (reasoning as a part, not the whole of the inference); exploring the problem or reasoning to reach an hypothesis involves observation, study, and the combination or recombinations of data[43]; and
5. the testing of the hypothesis by overt or imaginative action to provide verification.[44]

■ Critical Thinking as Evaluating Statements

Critical thinking is also associated with evaluating the processes and products of thought--our own perhaps most of all. At its most benign this view means the correct assessing of statements and at its most pernicious, the finding of faults.

Probably the most influential proponent of critical thinking is that of Ennis who defined it as "the correct (or reasonable) assessment of statements."[45] Coauthoring two multiple-choice college-level tests of critical thinking, the Cornell Tests of Critical Thinking Ability,[46] he assessed inductive and deductive reasoning, prediction and experimentation, fallacies, definition, and the identification of assumptions.

Ennis aimed for a comprehensive definition of critical thinking that would cover all cases in which statements were to be judged. His list of 12 aspects of critical thinking were ways to "avoid pitfalls" in assessing them:

1. Grasping the meaning of a statement.[47] If individuals know the meaning of a statement, they know what counts as evidence for and against it. They should also know what, if anything, it would or would not imply.
2. Judging whether there is ambiguity in a line of reasoning.
3. Judging whether certain statements contradict each other.

4. Judging whether a conclusion necessarily follows. The rules for handling equations and inequalities (e.g., if...then reasoning, categorical reasoning--whatever is included in a general class is also included in whatever that general class is included in, and vice versa, etc.).
5. Judging whether a statement is specific enough.
6. Judging whether a statement is actually the application of a certain principle.
7. Judging whether an observation statement is reliable. For example, criteria selected from the fields of law, history, and science follow:
    A. Observation statements tend to be more reliable if the observer is unemotional, alert, and disinterested; is skilled at observing the thing observed; has sensory equipment that is in good condition; has a reputation for veracity; and uses precise techniques.
    B. Observation statements tend to be more reliable to the extent that the statement is capable of being corroborated.
    C. If based on a record, observation statements tend to be more reliable if the record is made at the time of observation and is made by the person making the statement. Observation statements are more reliable than inferences made from them.
8. Judging whether an inductive conclusion is warranted. There are three types of inductive conclusions:
    A. Simple generalizations about experience. Such generalizations are warranted to the extent that there is a bulk of reliable instances of them (the greater the variability of the population, the greater the bulk needed); that they fit into the larger structure of knowledge; that the selection of instances is unbiased; and that there are no counter-instances.
    B. Explanatory hypotheses. These hypotheses are related to their support through their explanatory power: They explain a bulk and variety of reliable data. They have been deduced or loosely derived from the hypotheses together with established facts or generalizations. The hypothesis is itself explained by a satisfactory system of knowledge. It is consistent with the evidence and serves as the basis of controlled experiments. It is testable. It must be, or has been, possible to make predictions from them.
    C. Theoretic systems. Theoretic systems are warranted to the extent that they explain a bulk and variety of reliable data. Within the system, less abstract statements are explained by more abstract or broader ones. They are consistent with the evidence. An occasional inconsistency may be handled by adjusting the theory. Their corresponding competitors are inconsistent with the data. (Again, a single inconsistency does not destroy a competitor, for it too may be adjusted. However, a large number of inconsistencies damage the theoretic system.) Theoretic systems are testable. They are simpler than their rivals. The difference between a theoretic system and a hypothesis is that the former involves a network of relations among concepts, many of which are abstract and technical, while the latter is a simple relation between two or a small number of concepts, often less abstract and technical.[48]

9. Judging whether the problem has been identified:
   A. Judging that a want has been identified.
   B. Judging that a "valuable" goal has been selected.
   C. Judging that a decision about means is adequate.
10. Judging whether something is an assumption by examining several uses of the word: the deprecatory use, the concluding use, the premise use, and the presupposition use.
11. Judging whether a definition is adequate. Judging the explanation of terms. The pragmatic question must be answered: "Is this good enough for our purposes in this context? Some forms of definition are the Logical definition, Reported definition, Synonym definition, Equivalent contexts definition, Definition by example, Operational definition, and Range definition (see Chapter 5).
12. Judging whether a statement made by an alleged authority is acceptable. The relevant criteria from 1 to 11 should be applied. Furthermore, the credentials of alleged authorities should be reviewed. Authorities should be accepted to the extent that: They have a strong reputation. The statement is in their field. They are disinterested--that is, they do not knowingly stand to profit by the results of their statements. Their reputation could be affected by their statement, and they were aware of this fact when they made it. They studied the matter and followed the accepted procedures when coming to their conclusion.

In addition, Ennis proposed three dimensions along which these aspects of critical thinking could be simplified: the logical dimension, the criterial dimension, and the pragmatic dimension.

The **logical dimension** covers judging relationships between the meanings of words and statements. Individuals who are competent in this dimension know what follows from a statement or a group of statements by virtue of their meaning. They know how to use the logical operators: all, some, none, not, and, if...then, or, unless, etc. They know what it is for something to be a member of a class of things. Moreover, they know the meaning of the basic terms in the field in which the statement under consideration is made. They explain that grasping the meaning of a statement involves knowing what would count as evidence for and against it and what statements would contradict it. The kind of reasoning implied in this description depends on knowledge of the relevant subject matter.

The **criterial dimension** covers knowledge of the criteria for judging statements derived from various disciplines--except for the logical criteria, which are covered by the logical dimension. Here, we determine the extent to which the data being examined match the ideal set of standards/criteria. This six-step procedure involves two distinct types of thinking: first, the analysis of data, taking them apart to find specific clues relevant to a particular analytical purpose and to identify whatever pattern exist among the clues. Second, some evaluation is required, some judgment about the extent to which the clues and patterns of clues match the type of critical thinking feature sought. Engaging in these two kinds of thinking, analysis and evaluation for each of the purposes implied by the list of ten key critical thinking skills below, is what critical thinking is about.[49] Broken down, it means:

1. a statement follows from the premises;
2. something is an assumption;
3. an observation is reliable;
4. an alleged authority is reliable;
5. a simple generalization is warranted;
6. a hypothesis is warranted;
7. a theory is warranted;
8. an argument depends on an equivocation;
9. a statement is over-vague or over-specific; and
10. a reason is relevant.

The **practical dimension** covers the background purpose on the judgment. It covers the decision as to whether a statement is good enough for the purpose of making decisions about other statements.[50] An element of intelligent judgment is usually required in addition to applying criteria and knowing the meaning. Finally, the pragmatic dimension involves a judgment call with respect to the purpose for judging the truth of the statement. It is the subjective part of critical thinking, something sometimes overlooked by partisans of objectivity and dispassionate thought.

Flaws

However, Ennis' theory is not without its critics. Says one: Ennis turned to logic to provide educators with a "comprehensive and detailed examination of what is involved in making judgments about the worth of statements or answers to problems." It was to provide the rules for correct reasoning. Apparently, that, in and of itself, is not bad. However, the critic noted that Ennis' concept of critical thinking is weakened by proposing that logic may be a necessary condition of critical thinking, but, the critic added, it is not a sufficient one. Furthermore, although seemingly precise, the logical paradigm fragments rather than defines critical thinking by reducing it to a list of skills. [51]

Problematic is also that critical thinking is more an attitude than a collection of skills, and it requires knowledge of the particular domain to which the thinking is applied. As I noted, the centerpiece of this argument is that domain-specific knowledge is required in each dimension identified by Ennis. The second dimension of critical thinking, the criterial dimension, is also linked to knowledge of a particular field. These arguments represent a clear rejection of critical thinking as a context-free activity. Critical thinking is always thinking about something in some context for some purpose.[52]

Third, "truth" is rarely the goal in everyday cognition. In the ill-structured, purposeful world of everyday cognition, human thought is practical and opportunistic. To summarize Ennis' critics is to state that Ennis failed to capture critical thinking as people actually use it.

KEY DEFINITIONS IN FORMAL LOGIC[53]

Argument, as a formal term, does not mean loud shouting or a quarrel. An argument is a unit of reasoning in which one or more propositions (the premises) purport to provide evidence for the truth of another proposition (the conclusion). An argument refers to a series of statements that support claims within a logical structure. Arguments appear in both deductive and inductive forms. Arguments may state and defend a claim. Arguments may also seek to persuade others to agree to an idea. Arguments may still be persuasive, even if they contain a fallacy. The strength of an argument (with more than one step) is a function of the strengths of the component steps[54] (see Factual and Logical Strength below).

The notion of a good argument is an intuitive one. It becomes more precise by considering the following definitions:

- An argument is a sequence of two or more propositions of which one is designated at the conclusion and all the others are premises.
- A sound argument is an argument that is valid and that contains only true premises.
- An argument is valid if and only if all the premises are true, that is, they conform to reality. Then the conclusion is true.
- A cogent argument is a sound argument that is recognized to be such by virtue of the presentation of its structure and content.[55]

Assumption: A standard for critical thinking is that an argument be made as conscious as possible. When we write or read an argument, we should check to see if we have made any assumptions in the course of our reasoning. Taking nothing for granted is a sine qua non ingredient of critical thinking. An entire argument can be demolished if it contains one basic hidden and unexamined assumption. However, no evidence may be needed to support an initial assumption because evidence may have been found long ago and is now taken for granted.[56]

Claim: An assertion that maintains something is true and is put forward for questioning and testing.

Conclusion: A conclusion is commonly defined as a summary statement that comes last in spoken or written discourse. In logic, a conclusion is an inference derived from the premises of an argument. It may also be the proposition whose truth an argument seeks to establish. The key to understanding any written argument is finding its conclusion. Conclusions are often but not always recognized by indicator words: therefore, so, in fact, the truth of the matter is, in short, it follows that, shows that, indicates that, suggest that, proves that, we may deduce that, points to the conclusion that, and in my opinion. However, an argument's conclusion is not necessarily an ending point or summary but may be stated at any time during an argument or not at all.

Deduction is the subject of formal logic. It is a process of reasoning from a series of carefully worded statements, each proceeding in order from the one before. Deduction moves toward an inevitable conclusion within a closed framework. It argues from universal to particular statements about relationships between classes, characteristics, and individuals by way of a middle term, concentrating on the reason for things. Its formal expression is called a syllogism. The standardized language of syllogisms reduces everyday language to so-called verbal mathematics:

Major premise
Minor premise
Conclusion

A conclusion reached through deduction is not a hypothesis; its objective is not to generalize about evidence but simply to draw a result based on the preceding statements. Deduction begins with a generalization (not necessarily derived from inductive reasoning). The truth of a statement is important in logic. But when logicians want to gauge truth deductively, they use memory and experience, not the sampling and testing of the inductive method (see below).

Logicians distinguish between the truth or falseness of statements in an argument and the validity of the entire argument. Something that is **true** is in agreement with reality. Deductive arguments are **valid** if the premises are true, in which case the conclusion must be true also. The validity of the argument also depends on the correct use of logical terms such as "if...then," "or," and "and." A **sound** argument is one in which all the premises are true and the reasoning is valid. By the same token, an argument may be totally incorrect or formally invalid because a conclusion simply does not follow from certain premises:

Examples:

Every cat is an animal.
Every pig is an animal.
Therefore, every pig is a cat.

Every animal is a vertebrate.
Every cabbage is an animal.
Therefore, every cabbage is a vertebrate.

Every M is P.
Every S is M.
Therefore, every S is P.

Factual Strength: To evaluate an argument or prove a conclusion, logic is primarily concerned with methods of assessing strength. An argument must have two essential features. First, its factual strength means that its premises must be true (see above). Second, it must have logical strength (see below).

Fallacies are mistakes in reasoning. Formal fallacies are violations of the rules governing valid reasoning or formal logic. They involve an understanding of such words as major, middle, and minor terms; exclusion, inclusion, distributed, illicit distribution, affirm, deny, antecedent, consequent; and major and minor premise. Fallacies are often easier to accept when they are judged not as offering proof but as supporting plausibility.

Fallacies of Deductive Reasoning (Non-sequitors)[57]:

1. Equivocation: Using the same term with two or more meaning or referents (see Amphiboly below).
2. Undistributed Middle: Failure to connect major and minor terms.
3. Illicit Process: Moving from *some* to *all* when evidence is insufficient and only probabilities are appropriate.
4. Conclusion from Two Negative Premises: Establishes no relationship among all three terms in a syllogism.
5. Affirmative conclusion from a Negative Premise: Establishes a contradictory relationship among the terms in a syllogism.
6. Either/Or: Does not take into account all the alternatives (see Disjunctive syllogism).
7. Affirming the Consequent: Reasoning from a hypothetical proposition. Based on a supposition, conclusion seems--but is not--inevitable.
8. Denying the Antecedent: Also formed from a hypothetical proposition. An invalid form of the conditional argument (see below) in which the second premise (He does not want to keep the job.) denies the antecedent of the first premise (If he wants to keep the job, then he will work hard.), and the conclusion denies the consequent (Therefore, he necessarily will not work hard.).

   If he wants to keep the job, then he will work hard.
   He does not want to keep the job.
   Therefore, he necessarily will not work hard.

9. Affirming the Consequent. An invalid form of the conditional argument in which the second premise (He will work hard.) affirms the consequent of the first premise (If he wants to keep the job, he will work hard.). And the conclusion affirms the antecedent (Therefore, he necessarily wants to keep the job.).

   If he wants to keep the job, he will work hard.
   He will work hard.
   Therefore, he necessarily wants to keep the job.

10. Affirming the Disjunct: An invalid form of the disjunctive argument in which the second premise (He will work hard.) affirms one of the disjuncts in the first premise, and the conclusion denies the other disjunct (Therefore, he will necessarily not be fired.).

   He will either work hard or be fired.
   He will work hard.
   Therefore, he will necessarily not be fired.

Fallacies of Inductive Reasoning: Material, Formal, and Emotional[58]

An argument that is fallacious is one that appears to be reasonable but is not because of errors in either its form or its content. While the informal or logical fallacies may be inductive or deductive, the characteristic shared by them is that they are errors of content rather than of structure and due to either carelessness or hidden motives.

A bit of advice for students. Mere assertion of a statement does not constitute truth. Nor is a reason automatically irrelevant because it is false. Each proposition must be examined on its own terms. Further, punctilious accuracy in reasoning should be avoided when such precision is irrelevant or inconsequential.

1. **Ad Hominem**: To the man. Points are won on an issue by attacking the arguer rather than the argument (a form of character assassination). It distracts attention from the real issue with a negative trait of a speaker as evidence that his statement or argument is weak. It is still reasonable to criticize someone, but logic tells us that that someone may not attack another's character as proof that the person is wrong about something. The reverse is the **Testimonial**: e.g., Larry Bird says Dannon Yogurt is great. I like Larry; he must be right.
2. **Ad Populum**: To the people. This fallacy involves believing some team or organization is right because we are loyal to it. Would a problem stated more passionately than anyone else make it more correct?
3. **Ad Misericordium** means appealing to fear, pity, or someone's sympathy. Appeals persuade through emotions that prevent rational analysis of an argument's merits: e.g., Students ask for an extension on a paper because the dog ate it. Students ask to a receive a higher grade because their mother is sick.
4. **Ad Verecundian**: To authority. This means support for an argument with reference to an expert who is really inexpert, e.g., If Dr. Johnson says the Chinese will overrun Africa by 2005, then, they will. Because Dr. Johnson is a respected chemist, not a political scientist, a fallacy has occurred.
5. **Amphiboly**. Multiple meanings are possible, e.g., Clara Schuman was too busy to compose herself. Does that mean she could not pull herself together or she could not write music? I bequeath 100 dollars to Eliza Singleton and Daisy Singleton. This statement can be interpreted in whatever way it suits personal interests.
6. **Appeal to Bandwagon**: To the majority. This fallacy uses the fact that a large number of people believe a proposition to be true as evidence of its truth. Popularity or crowd or mob appeal is another version of the appeal to authority, but in the latter the authority is an amorphous public, providing the security of the "herd instinct."
7. **Complex Question**: Automatic incrimination, e.g., When was the last time you beat your wife? To solve this problem, the question should be dealt with part by part.
8. **Contradictory Premises**. When the premises of an argument contradict each other, there can be no argument, e.g., All statements in this box are false.

9. **Dicto Simpliciter**: A hasty generalization. There are too few instances to support a conclusion. It means an argument is based on an unqualified generalization, e.g., Jogging is good; therefore, everyone should jog--is simply not true in all cases.
10. **Either/Or**: All or nothing. This false dilemma oversimplifies a situation, asserting that there are only two choices, when other alternatives actually exist.
11. **Equivocation** means creating a verbal smoke screen. There is a shift in meaning that occurs between the premises and the conclusion. Equivocation is drawing an unwarranted conclusion from an argument containing a term that has several meanings, under the pretense that the term has only one.
12. **Ethnocentrism**. This is a form of provincialism that assumes the familiar, the closer to what is our own, is better.
13. **Exaggeration**. Distortion by exaggeration. An erroneous reduction of alternatives or possibilities, often a reduction to just two: either/or.
14. **False Alternative**. Excluding relevant possibilities unjustifiably.
15. **False Analogy** is a flawed comparison between two things that have some similarities but also significant differences that are ignored, e.g., If mothers don't drink milk, why should their children? We cannot assume that because two circumstances are alike in some respects (Both mother and children are human and in the same family.) that they are alike in all other respects.
16. **False Cause**. To reduce to absurdium is the fallacy of claiming that the allowance of one event would lead to a chain reaction that could not be stopped. It urges agreement on the basis of logic for a position that involves more variables or unknowns (see also Slippery Slope).
17. **False Dilemma**. Erroneously reduces the number of possible choices on an issue.[59] Questionnaires frequently create false dilemmas. Writing assignments that ask students to defend a position on an issue may similarly restrict thinking.
18. **Fallacy of the Half-Truth** occurs when relevant information is omitted.
19. **Faulty Generalization**. Apart from referring to jumping to conclusions from inadequate evidence, the material from an authority may be flawed or the authority may be incompetent or biased.
20. **Loaded Question** is the use of a biased question that seeks to provide a predetermined answer (see Complex Question).
21. **Hypothesis Contrary to Fact** refers to starting with a hypothesis that is not true and drawing supportable conclusions from it, e.g., It always snows in Florida. Therefore, skiing is a very popular sport.
22. **Non-sequitor**: Statements do not follow each other logically. It means supporting one proposition on the basis of irrelevant premises.
23. **Post Hoc, Ergo Propter Hoc**: After this; therefore, because of this. This fallacy uses the fact that one event preceded another as sufficient evidence for concluding that the first caused the second. Post hoc fallacies mistake coincidence for cause and effect, e.g., Whenever I go to the city, it snows. Therefore, I shouldn't go to the city.
24. **Petitio Principii**: Begging the question. It tries to support a proposition with an

argument in which that proposition is a premise. It assumes the truth of something trying to be proven, e.g., The physician from a Moliere play claims that the sleep-giving power of opium is because it has a dormative value. The proposition and the premise says the same thing in different words.

25. **Poisoning the Well** means prejudicing others against an opponent before an argument is heard so that he or she will not be heard objectively.
26. **Provincialism**: (see Ethnocentrism).
27. **Questionable Cause** labels something as the cause of something else contrary to what is available or based on insufficient evidence.
28. **Red Herring**. A diversionary tactic, supporting one proposition by arguing for another proposition. A red herring distracts by leading to a side issue.
29. **Slippery Slope** means that once a first step is taken, a slide all the way down is inevitable. **The Domino Theory** claims that if X falls, so will everything else. The **Balkanization Theory** uses a similar analogy that the break up of one nation inevitably results in the break up of others.
30. **Suppressed Evidence**. The omission from an argument of known and relevant evidence.
31. **Straw Man** attacks a position similar to but significantly different from an opponent's position.
32. **Tokenism** means mistaking a token gesture for an adequate effort.
33. **Tu Quoque**: You too. This fallacy tries to refute an accusation by showing that the speaker is, him or herself, guilty of the charge. Pointing to another wrong, "Two wrongs make a right" and "Don't look at me. He did it too," are attempts to avoid the issue.

Formal Logic:

Categorical Syllogism.
Major Premise: Initial broad assertion
Minor Premise: Specific application
Conclusion: Inference drawn from the first two
e.g.: All our employees are covered by group insurance.
Joe is an employee.
Joe is covered by group insurance.

Disjunctive syllogism. A statement of alternative possibilities using either/or
e.g.: All customers are classified as cash or credit.
Customer Smith does not buy on credit.
Customer Smith is a cash customer.

Hypothetical syllogism. The major premise begins with **If** or **When** and builds on conditional thinking, but is not actually happening.
e.g.: If loans are refused, the company goes bankrupt.

Loans have been refused.
The company will go out of business.

Rules.

1. Premises must conform to reality.
   e.g.: Government ownership is inconsistent with democracy.
   The postal service is government owned.
   The postal service is inconsistent with democracy.
2. Major premises must include all cases. Premises must be so related that they lead inevitably to their conclusions. When the position of middle term is unchanged, a fallacy of the undistributed middle occurs.
   e.g.: *Invalid*
   All businessmen pay taxes.
   Mr. Tobin pays taxes.
   Mr. Tobin is a businessman.
   (Second premise and conclusion should be reversed.)

   Invalid
   Why waste precious time?
   Get a fax.
   (Implies either you own a fax or you are wasting time--but other technologies may do just as well.)

   Invalid
   When a man asks questions, he proves he is alert.
   Simms is dumb. (Implies Simms does not ask questions which contradicts the conditional statement of the premise. Opposite does not work.)

Hidden Premise or Conclusion: A premise or conclusion is hidden if it is not stated but implied in an argument. When the argument is cast as a syllogism, the missing premise or conclusion is expressed.

Generalizations/Hypotheses are the results of induction or reasoning from particular instances or evidence. What makes a good generalization may be summed up with the acronym **STAR**. The **STAR** system requires that examples be **S**ufficient, **T**ypical, **A**ccurate, and **R**elevant in order to support a generalization.[60] Good generalizations guide predictive power.
Hypotheses are conclusions derived from inductive reasoning. Only after time and continuous testing can hypotheses be established as final conclusions or facts. Guidelines for evaluating hypotheses based on statistical samples follow:

1. The greater the size of the sample, the greater the probability that the sample represents the whole of a class it is supposed to represent.

2. The more representative the sample is of a class, the more likely that accurate conclusions will be drawn about the class from the sample.
3. One counterexample can refute a generalization arrived at through inductive reasoning.
4. If statistical evidence is offered, it should be offered in sufficient detail to permit verification. Sources or background material about the particular researchers should also be cited, so others can determine their reputation and independence from interests vested in the study's outcome.
5. When polls are taken, it is important to know not only that an organization or agency taking the poll is reputable (such as Gallup, Roper, or Harris), but also that the exact formulation of the questions is acceptable.[61]

Inductive Reasoning or the Scientific Method[62]: Most everyday reasoning is inductive, not deductive. It is the process of noting limited facts or events and drawing an explanation, tentative conclusion, or theory about them. Inductive reasoning discovers new information or supplies missing information. It is used when examining all data would be impossible or impractical, and it is done through sensory observation, enumeration, analogy, causality, comparisons, statistics, and/or extrapolation from patterns. Analogical reasoning is like induction by enumeration, except that it yields a single conclusion rather than a general one, and thus has a greater chance of being correct. Statistical inductions are like other kinds, except that they infer from a fact that *n* percent of a sample has a certain property, rather than from 100% of the sample. Thus, induction is a way of reasoning from evidence about some members of a class to draw a conclusion about all members of that class. These arguments do not guarantee the truth of their conclusion; rather they make conclusions probable. This structure is used:

Data
Data
Data
Data
Conclusion

Conclusions based on inductive observations repeatedly confirmed are called hypotheses and are always less certain than the evidence itself. Conclusions should not embrace more than the evidence warrants. Or we should use a qualifier like may, suggest, or probably.

Logic is organized reason or the science of reasoning or inference. Logical reasoning uses rational methods to persuade. There are two aspects of logic: form (correctness or sequence) and matter (content or truth).

Logical Strength: To prove a conclusion, an argument must have two essential features. First, its premises must be true. We thus start from factual strength (see above). Then it must have logical strength or internal coherence. The premises must be logically related to the conclusion in such a way that if the premises are true, the conclusion is likely to be true as well.

Logical strength is a matter of degree. The stronger an argument is, the tighter it is. If logical strength is a function of the gap between premises and conclusion, then the larger the gap, the weaker the argument.

An argument with more than one step can be no stronger than its weakest step. When there are nonadditive premises within a single step, that is, when two or more arrows converge on the same conclusion, the argument is at least as strong as the strongest component. However, an argument may have false premises and still be strong, or it may have true premises but be weak; the truth of the premises and the strength of the argument are separate matters. A list of standards for judging the strength and weakness of an argument follows:

1. Are the reasons adequate to support the conclusion?
2. Is the reasoning sound? Are the premises true and the reasoning valid?
3. Are there any hidden premises or assumptions crucial to the argument?
4. Are any central words ambiguous?
5. Are there logical fallacies?
6. Is any important information or evidence omitted?
7. Is any information false, contradictory, or irreconcilable?

Material or major logic presupposes formal validity but also inquires about the conditions necessary for reasoning to be totally valid. Material logic considers such problems as logical definition and division, the requirements of the various kinds of demonstration, and the methods of avoiding material fallacies such as begging the question, arguing in a circle, confusing cause and antecedent (see Fallacies).

Premises are statements, evidence, or assumptions offered to support a position or another proposition (often, the conclusion).[63] In many arguments some premises are assumed but not stated; they are implicit, not explicit. Often a premise is left implicit because it is obvious and noncontroversial.

Propositions are claims, statements, or assertions used in arguments. They can be either premises or conclusions and either true or false. Reasoning is the process of providing evidence for the truth or falsity of propositions in which some (the premises) are asserted as support or evidence for another (the conclusion).

Categorical and Hypothetical Propositions in logic mean that every verb is reducible to the verb form, to be, or a verb copula and may be divided by the different possible extensions of their subject terms or quantity: Singular, Particular, Universal, and Indefinite.

Type of Sign: Always, Sometimes

Quantity:

Universal: No, Every, All, Each
Particular: Some, The, Certain, A, One, Every, Each, That, This

Proper Name: The, A, One

Modal Propositions:

Moods: may, could, should, might

Modes:

Necessity: must be, is necessarily, e.g., Justice must be rendered.
Contingency: need not be, is not necessarily, e.g., Honesty need not be difficult.
Impossibility: cannot, is not possibly, e.g., Happiness cannot possibly be bought.
Possibility: can/may be, is possibly, is able to be, need not be, e.g., Truth can be attained.

Combinations of Modes:

Universal necessity: Every human must be respected.
Particular necessity: Some animal must be intelligent.
Universal contingency: No flatterer need be tolerated..
Particular contingency: Some courage need not be praiseworthy. Not every excuse need be accepted.
Universal impossibility: No psychopath can be trusted. All anger cannot be justified.
Particular impossibility: Some anger cannot be justified. Some criminals cannot be trusted.

Reasoning may be defined as the drawing of conclusions, judgments, or inferences from facts or premises. The principal methods of reasoning are known as Induction or Deduction. Inductive arguments reason from the known to the larger but similar unknown. Deductive arguments start with one or more propositions or premises and then investigate what conclusions necessarily follow from them. Sometimes these premises appear as long chains of reasoning. Reasoning is either fallacious (see below) or cogent. Cogent reasoning must satisfy three criteria: 1) it starts with warranted premises, 2) it uses all relevant available information, and 3) it is valid or true. The whole point of reasoning is to determine the truth or falsity of propositions that we are not in a position to verify directly by sense perception.

Reasons include data, evidence, and premises, while conclusions include those deductively drawn as well as hypotheses. Reasons may also be generalizations that can function as conclusions in another context. Once the argument's main conclusion is uncovered, the identification of supporting generalizations usually becomes clear. Reasons can be explanatory (serve to explain) and justificatory (serve as evidence).

Syllogism is the formal structure of a deductive argument in which the conclusion is supported by two premises. The first statement is called the major premise and the second is called the minor premise. Syllogisms are useful for testing the reliability of a deduction according to the rules of logic. Arguments are turned into syllogisms in order to: 1) to find out exactly what is being said and thus to be able to judge whether each statement is true or false; 2) to discover and expose hidden premises; and 3) to find out if one thought follows logically from another or if an inference drawn makes sense.

THE BROCKPORT POLICY ON STUDENT ACADEMIC DISHONESTY[64]

Students working honestly and conscientiously acknowledge their sources directly in the text and/or a bibliography. Giving credit (documenting) means identifying the source in the text where the words or idea appears.

Academic dishonesty is a serious breach of that trust which exists between a student, one's fellow students, and the instructor. Academic dishonesty is a major violation of college policy, which can result in the failure of a course as well as in a range of disciplinary actions, from an official warning to suspension or dismissal from the college. Any student suspected of such a violation will be subject to charges. Violations of academic honesty include, but are not limited to, the actions described in Section I. Published divisional unit and/or individual policies will address additional circumstances unique to specific academic area(s).

■ Definitions of Academic Dishonesty

1. Plagiarism is the presenting as one's own the words, ideas, or products of another without providing a standard form of documentation, such as footnotes, endnotes, or bibliographic documentation.
2. Fabricating facts, statistics, or other forms of evidence in papers, laboratory experiments, or other assignments.
3. Presenting someone else's paper, computer work, or other material as one's own work.
4. Writing, or attempting to write an examination, paper, computer work, or other material for another student; allowing someone else to take one's examination.
5. Buying and selling of examinations; possession of examinations or answers to examinations without the instructor's permission.
6. Using "cheat sheets," looking onto another's paper, or talking to someone other than the instructor or proctor during an examination, without the instructor's permission.
7. Failing to follow the rules of conduct for taking an examination as stipulated by the instructor prior to the examination or as stated by him or her in a written course syllabus.
8. Presenting work for which credit has been received or will be received in another course without the consent of the instructor(s).

ON PLAGIARISM

Lyn Parsons

The word, *plagiarize*, in its original context meant the same as "to kidnap." It still has that same connotation, for the plagiarist "steals" ideas or words from someone else and pretends--or appears to pretend--that they are his or her own. Thousands of new students enter college every year with no real experience in writing research papers, and sometimes there exists genuine confusion as to what constitutes plagiarism. This short description and the examples contained therein are designed to eliminate that problem.

Note the citation above (not shown) regarding the origin of the term itself. The number "[1]" indicates that either the information or the words have been taken from somewhere else. In this case the "somewhere else" is Neil Stout's, *How to Get the Most Out of Your U.S. History Course*, page 67. The exact form of correct citation can vary; that is not the point here. Because origins of the term plagiarism are not generally known, the source of this information should be documented:

1. Neil Stout, *How to Get the Most Out of Your U.S. History Course* (Lexington, MA: 1993) 67.

On the other hand, the sentence beginning "Thousands of new students enter college. . . ." contains information generally known and need not be documented or footnoted. Likewise, a statement like "America entered World War II following the Japanese attack on Pearl Harbor," or "the Declaration of Independence was published on July 4, 1776" need not be documented either.

Let us take another example, this time a full quotation from a Pulitzer Prize-winning book:

> The actions of the eight upper South states in 1861 had an important but equivocal impact on the outcome of the war. One can begin to measure that impact by noting the possible consequences of what did *not* happen. If all eight states (or all but Delaware) had seceded, the South might well have won its independence. If all eight had remained in the Union, the Confederacy surely could not have survived as long as it did. As it was, the balance of military manpower from these states favored the South. The estimated 425,000 soldiers they furnished to Southern armies comprised half the total who fought for the Confederacy.[2]

2. James M. McPherson, *Battle Cry of Freedom*, (New York, 1990), 306.

If a student were to copy McPherson's paragraph word-for-word, without mentioning its source in any way, this would obviously be a clear case of plagiarism in its most blatant form. But what if a student should do this:

> The actions of the eight upper South states in 1861 had an important but equivocal impact on the outcome of the war. One can begin to measure that impact by noting the possible consequences of what did not happen. If all eight states (or all but Delaware) had seceded,

> the South might well have won its independence. If all eight had remained in the Union, the Confederacy surely could not have survived as long as it did. As it was, the balance of military manpower from these states favored the South. The estimated 425,000 soldiers they furnished to southern armies comprised half the total who fought for the Confederacy.[2]

2. James M. McPherson, *Battle Cry of Freedom*, (New York, 1990), 306.

Is this plagiarism? The item is clearly and accurately cited as to the source and its location. But the answer is still YES, because it has been copied word-for-word, and although the source is cited, we have no idea as to whom the words belong. They are McPherson's, not the writer's. A word-for word quotation must always be in quotation marks.

How about this case:

> The states in the upper South were very important to the outcome of the war. If all of them had joined the Confederacy, it probably would have won the Civil War. If all had stayed in the Union, the Confederacy would have had no chance. As it was, 425,000 men from the upper South joined the Confederate army, which was about half the entire force.

Here there are no quotation marks, because they are the author's words, not McPherson's. Is this plagiarism? The answer again is YES because while the words belong to the writer, the ideas and information (the influence of the upper South on the outcome of the war, the number of soldiers involved, etc.) are not generally known and belong to McPherson. Therefore the paragraph must indicate that the ideas contained within it come from somewhere else.

To sum up, if either the words or the ideas belong to someone else, you must indicate this in some way by showing where the words or ideas may be found. If there is doubt, cite the source. Very few undergraduate papers are downgraded because of an excess of documentation!

THE SCIENTIFIC METHOD

Jack A. Ward and Howard R. Hoetzel[65]

In analyzing natural phenomena, scientists attempt to follow a logical approach called the *scientific method*. This approach involves three important things: objective observation, measurement, and testing. The methods are precise so that other scientists can repeat the observations. As information about a phenomenon accumulates, scientists' inquiries become more and more sophisticated. Finally, we grow to understand the phenomenon they have studied. The result may improve our lives and lifestyles, but that is not the primary goal of science. The primary goal is simply to understand natural phenomena.

The questions that scientists ask take the form of testable *hypotheses*. Say, for example, that a scientist notices that two events are always observed together; when A happens, so does B, and vice versa. The scientist might then propose that the two events are inseparable and that when one occurs, the other will too. A tentative statement about the relationship between A and B is a hypothesis, which is no more than an educated guess about the phenomenon. The scientist must present evidence either to support or to refute this hypothesis. The scientist must observe A and B as often as possible, measuring them, testing them, trying A without B and B without A, and so on. Eventually, the accumulated evidence may allow the scientist to conclude that the hypothesis is correct--that A and B are inseparable and that one influences the other. Other scientists will undoubtedly want to reexamine the occurrence of A and B. They may ask slightly different questions and formulate different hypotheses, but their results can only expand our understanding. When scientists collectively decide that A and B are related, the hypothesis may become a *theory* or a *law*. But the answer may inspire another questions, and so the process continues.

What if the scientist is unable to find a constant relationship between A and B? Then the original hypothesis is discarded and an alternative is formulated. The scientist may hypothesize that some other factor causes the association and follow the same procedure to prove or disprove the new hypothesis. The main aim of science is to explain a specific phenomenon to the extent that we can predict when and where it will occur again. This is the kind of information that may improve our lives.

A key feature of scientific methodology is the use of *controlled experiments*, which are designed to eliminate bias in interpreting an experiment's final results. Suppose, for example, that a scientist is testing a new drug that is hypothesized to prevent cancer. How might the scientist proceed? First, the drug is tested on laboratory animals, such as rats, that all have the same type of cancer in the same stage of development. The scientist uses two groups of animals, as close as possible in age, weight, sex, and so on. The members of one group become the *experimental group*, and the scientist injects them with the drug in salt solution. The second group, the *control group*, are injected with only the salt solution. If the cancer in the animals in the control group continues to develop but not in those in the experimental group, the scientist could conclude that the drug prevented the spread of cancer. Moreover, the scientist could conclude that the effect was not the result of factors such as age, sex, or the injection, because the test animals were so carefully selected.

After exhaustive tests to make sure the drug is safe, it might then be administered to human patients. Here, too, experimental control groups are set up. The experimental group receives the drug; the control group gets only the saltwater injection. To avoid any human bias, even the attending physician may not know which patient is receiving which treatment. Despite careful planning, unanticipated problems may arise. For example, the drug may not always work for patients in the experimental group. What then? Again, alternate procedures are tried and repeated, which result in more data. Finally, researchers may determine a precise dosage for people with different health histories.

Obviously, science and scientific research are not all glamour. Scientific inquiry is usually hard work, and the constant repetition of experiments often proves quite dull. What, then, motivates scientists? The answer is satisfaction with new knowledge. New knowledge is not always immediately applicable to human life. Many scientists study odd groups of animals and unusual phenomena that may seem a waste of time. For instance, studying molds and fungi may seem silly, but early studies of these organisms led to the discovery of antibiotics, which improved human health and life expectancy throughout the world. Investigating phenomena that do not have direct application to humans is called *basic research*; studies that have obvious human application are called *applied research*. Applied research would be impossible without basic research. In fact, the principles of biology are derived from basic research.

APPENDIX PART 3

SELECT COURSE DESCRIPTIONS

Advanced Spanish Conversation and Composition *Victor Rojas*

Conducted in Spanish, this course provides discussion on a variety of topics and researched themes. An in-class composition and oral interview assess the initial level of proficiency. The conversation component (60% of class time) includes group work, simulations of real life situations, a formal oral presentation based on a research paper, and two oral interviews. Emphasis is given to fluency and accuracy of oral expression. The writing component (40% of class time) includes a journal, eight two-page essays (two of which are written in English), two in-class essays, and a cumulative research paper of approximately 12 pages. Students practice formal research and methods of documentation based on the *MLA Handbook*. Emphasis is given to the writing process, critical thinking, and the deep revision of essays.

Anthropological Research *Chuck Edwards*

Anthropological research covers the conventions of research design and writing in anthropology necessary to initiate and complete the ANT 496, Senior Seminar Project, the following semester. Students identify a research problem, conduct exploratory library and documentary research, conduct preliminary field or laboratory work, identify and refine a working hypothesis, and develop a formal research design. Students also learn the writing conventions of anthropology, including preparing and managing field/laboratory notes, bibliographic search reports, observation/site reports, and research designs.

Anthropology of Sport *Tom (Lefty) McIntyre*

Sports are expressive phenomena/experiences/activities that provide opportunities for people to interpret for themselves some of the salient social relationships, social processes, and values of their society. Students use critical thinking skills, reasoning and the practice of deep revision to examine scholarly literature pertaining to sport in relation to cultural performance, ceremony, ritual, festival spectacle, and symbols, as well as religious and political ideologies. Research methods combined with APA style documentation are taught to help prepare research papers, book reviews, and oral reports. Emphasized are similarities and differences between sports as cultural performances throughout the world.

Biochemistry Honors Seminar *U Mass, Amherst*

Biochemistry majors take a two-course sequence in order to fulfill the junior-year writing requirement. The first paper in the first course is about two pages in length and deals with a topic assigned to all students by the section leader. It is revised after consultation with the writing TA, and the final draft is graded for "basic writing skills." The second paper, essentially a research review, is written in the traditional format, and the eight-to-ten page final draft is followed by a 45-minute oral presentation. The student then revises the paper, informed by consultation with his or her section leader and student reviewers.

The emphasis in this second course is on achieving professional standards in presenting research. Attention is paid to the conventions of recording data, and both results reports and formal written reports are executed according to highly structured formats. There is no required text, though there is a lab manual and a substantial amount of reading to be done in connection with the seven experiments upon which the five final reports are based. Each report is reviewed in rough draft form and then revised.

Business and Economics *Dennis Chasse*

This course helps students develop the skills required of the working economist. Students find and describe data, interpret the results of standard statistical techniques, prepare issue papers, and make preliminary estimates of the costs and benefits of proposed actions.

Details: The course includes a number of short assignments analyzing newspaper articles and using statistics.

The writing assignments are sequenced to lead to an Issues and Options paper:

1. Prepare an annotated bibliography and summarize a seminal article.
2. Describe a table containing data that you plan to use in your larger paper.
3. List the various courses of action to solve a particular problem or realize a desired objective.
4. Describe the likely results of each course of action.

Integrate the above into an issues and options paper, the preliminary paper to a cost-benefit or cost-effectiveness analysis. Students specify the information needed for a cost-benefit or cost-effectiveness analysis.

History of Computer Science *James Snell*

An overall view of computing, emphasizing the development of communication skills for the profession. Topics include: a detailed history of computing technology; social effects of computing; ethics in the field; professional literature; and social, governmental, and technical developments. Involves extensive reading and writing, both technical and nontechnical, as well as library research, prepared group discussions, and oral presentations.

Integrated Science *Alverno College*

Matter and energy are the major content themes of an interdisciplinary general education science course. The course aims to develop skills in scientific reasoning (observation, recognizing patterns, raising questions, formulating hypotheses, and designing experiments) and to foster a critical attitude toward popular scientific literature.[1]

Introduction to Mass Communication *Kate Madden*

Surveys the mass media and their functions; historical, social, legal, and economic aspects of mass communication; current practices, responsibilities and problems of the media, and the roles of newspapers, magazines, radio, television, motion pictures, and other mass media in society and their impact on community, national, and world affairs. This course incorporates writing as a significant mode of expression to provide students with an opportunity to develop and refine their ability to think critically and articulate ideas about mass communication effectively in writing. Writing exercises include short position papers and an extended essay.

Legal Studies: Legal Research and Writing *U Mass, Amherst*

Weekly class time is largely devoted to content material, such as the discussion of particular cases, principles, or procedures, and is handled by the professor. Most of the writing instruction goes on through small group conferences and individual tutorials, which are handled by the teaching assistant, who provides extensive commentary on all writing assignments. One individual conference is required. Both teachers collaborate on assignment grading. A legal research manual and a civil rights case textbook are used.

> Program Summary
>
> The writing assignments are varied and involve learning particular, and sometimes rather specialized, critical thinking skills and writing formats. Students write: four two-page, ungraded briefs of a case, a case annotation interpreting a section of a statute, or a summary of a law review article; two graded legal memos of two or three pages, which require students to review cases, describe court interpretations of policy, manipulate legal language, and analyze applications of law to particular cases; and a graded eight-to-fifteen page argumentative brief.

Mathematics: Real Analysis *Kazumi Nakano*

Prerequisites: MTH 203 and MTH 424. An introduction to Real Analysis is a theoretical course with emphases on proof techniques and writing skills. Topics include: real numbers, denseness of rational numbers, convergence of a sequence of real numbers, Cauchy sequences, the Bolzano-Weierstrass theorem, continuous functions, uniform continuity, differentiable functions, and integrable functions. To enhance understanding of the topics, a series of writing tasks are required.

Nursing: Issues and Trends Affecting Health Care

Sheila Myer

This course is designed to help students sharpen their writing skills and examine issues and trends in health care that will influence their professional practice. The course explores topics concerning delivery of health care and examines social, historical, economic, and professional trends affecting nursing practice and education. The course helps students write seriously about the nursing profession using a variety of textual formats and through a guided process of critical analysis and deep revision.

Political Science: The Poor in America

Sarah Liebschutz

Who are the poor in America? Why are poverty levels highest among women? Why is welfare reform continually on the public agenda? These questions are examined from an intergovernmental public policy perspective, in which equal attention is paid to policy implications for women and men. How do political scientists write about the politics of poverty? Students gain experience in the writing conventions of this field through assignments that stress description, analysis, and evaluation. Students demonstrate understanding and application of these writing conventions in two assignments: a persuasive essay and a policy analysis.

Social Issues in Computing

U Mass, Amherst

Students write in three "modes," averaging about ten assignments per semester, using current topics in computing as the basis for inquiry, discussion, and research. Sample topics: Computerization and the Changing Meaning of Work; The Politics of Technical Change; Computer Crime; Electronic Politics. The "essay mode" includes a piece of historical research, a discussion of a social issue, and a discussion of an ethical issue, each three or four pages long. The "business mode" includes an application letter, resume, conference report, and one other piece of correspondence, such as a memo sequence or grievance letter. The "technical mode" assignments represent a cycle of writings related to a single project: a proposal, feasibility report, progress report, technical report, and finally a technical article, ranging from five to twenty-five pages long. A ten-minute oral presentation is included.

COURSE PROPOSAL GUIDELINES

Information to include with Course Registration Form:

1. List the specific kinds of writing to be required (e.g., laboratory reports, critical reviews, research proposals, etc.), keeping in mind that they can build on each other and seek variety and some applicability beyond the academic discipline.
2. What approximate length will the various written tasks be? With what frequency will the assignments be given?
3. What are the relative weights of the various written tasks in the grading process?
4. What *general* writing competencies are students expected to achieve?
5. What forms, conventions, and styles *distinctive* to the discipline will be covered?
6. What provisions will be made for including various steps in the writing process (discussion before writing, information gathering, draft work/revising, peer critiques)?

IDEAS FOR WRITING INFORMALLY IN THE CONTENT AREAS[2]

Practice should not always mean simultaneous performance. The preeminent purpose of informal writing is that it keeps students thinking and writing without increasing our paper load. Other purposes include using it as a way into a subject, responding to reading, starting discussions, practicing for tests, solving problems, asking questions, sampling understanding, and reinforcing and reviewing material. In detail, students can

1. Keep a running notebook of class discussion/readings; write on the topic to be discussed at the beginning of class; during the middle of class, refocus or report progress; the last five minutes of class, use five-minute writings in place of a quiz to focus attention on concepts from the lecture. Have one or two students read them at the beginning of the next class. Answer: What have you learned? What was memorable and useful? What have you not learned?
2. Fill in an exit processing sheet that asks one or two of the following questions: What did you learn this week? What goals do you have for next week? What was the major theme, the central idea of the discussion? What issues or questions did the reading/discussion address? Why are they important? What issues or questions did the reading sidestep or ignore? Why is this omission of consequence? How does the reading examine its subject matter? By introspection? By observation? By reflection on that observation? What do you think the author wants readers to do after finishing this piece?
3. Develop a file of their own writing to track their learning.
4. Keep a double entry notebook showing their thinking about what is being said--one side lecture/text notes and the other side comments, questions, challenges, doubts: Note Taking (What you take in); Note Making (What you speculate about)
5. List 5 things learned in order of priority.

6. List 5 confusing things.
7. Summarize a lecture for themselves.
8. Summarize a lecture for someone in another field.
9. Summarize a lecture for someone at a lower intellectual level.
10. Rehearse ideas about a question immediately before discussing it.
11. Describe second thoughts about....
12. Work through a difficult or complex disciplinary issue, recording all steps in thinking.
13. Apply principles.
14. Write a list of all they know about a subject.
15. Write a list of all they want to know about a subject.
16. Outline what someone has written halfway through reading, as a way of analyzing the author's organization.
17. Paraphrase what they understand their assignment to be, so we know they understand it.
18. Refocus an interrupted or tangential discussion.
19. At critical junctures, explain complex material on paper to themselves.
20. Clarify a phenomenon or concept.
21. Marshall arguments on an issue.
22. Define the vocabulary of a subject.
23. Compose an extended definition on a subject.
24. Summarize and switch audiences for their writing: legislators, the elderly, POWs, the broader public, etc.
25. Switch forms/formats on the same topic: book reviews, notebook entries, position papers/arguments, summaries, executive highlights, worksheets/flow charts, outlines, research, letters to the editor, speeches, proposals, literature reviews.
26. Record observations.
27. Speculate. What if...?
28. Dialogue with us/ their laboratory partner.
29. Pose problems.
30. Synthesize.
31. Rewrite notes and scraps of thought into paragraph form.
32. Write three to five questions about something they have just read, seen, heard.
33. Ask: What questions should this report/essay answer?
34. Write self evaluations at the end of a session/course.
35. Keep a running list of patterns of errors.
36. After each session, e-mail summaries to their peers and/or us.
37. At the end of the hour, draft questions that we answer at the next session.
38. Topic suggestions:
    - A. How do I go about doing an X problem?
    - B. How do I read the textbook?
    - C. Where do the rules of X come from?
    - D. What is X?
    - E. Is X discovered or invented?

EVALUATING TEXTBOOKS

The case against textbooks. Texts are notorious for containing language that no human has ever used. Many are redundant with cookbook formulas, flabby exposition, and irrelevant exercises.[1] The presentation of examples and models may not be bad in themselves. But they are often weak in showing disciplinary knowledge because they use essays as disciplinary texts instead of actual working documents, such as field reports, proposals, and so on. Some faculty advise throwing texts out and teaching without them. But the best use for texts may in fact be to teach or stimulate us.

■ Features of Disciplinary/Writing Texts

Title:
Author:
Date of publication and edition:
Publisher:
Number of pages:
Hard or soft cover:
Instructor's manual:
Price:

■ Cognitive Processes Engaged

1. Concept formation
2. Issues (argument)
3. Problem solving (situational, relational, causal; following a chain of events to its logical conclusion)
4. Prediction
5. Application

■ Content

1. Definitions/glossary
2. Exposition/explanations
3. Illustrations
4. Vocabulary
5. Models: sample writings of students/professionals
6. Table of Contents

7. Assignments
8. Exercises/answers
9. Quizzes
10. Index
11. Teaching apparatus

■ Stylistic Features

1. Accuracy
2. Relevance
3. Timeliness
4. Scope
5. Sequence of information
6. Readability (formatting, typesetting)

■ Questions to Raise When Evaluating a Disciplinary Reader

1. How is the reader organized? By theme, topic, chronology, other?
2. Are a variety of genres represented--formal, academic, professional, personal?
3. Is the reading level of the essays appropriate for our course? Will students understand the essays? Are the essays well-written?
4. Does the reader contain useful study questions as well as other apparatus? For example, are the paragraphs numbered? Is there an instructor's manual?
5. Could an assignment sequence be built around some of the essays?
6. Does the reader contain related reading/writing activities?
7. Does the reader contain biographical/bibliographical information on the writers/essays?
8. Other comments.

■ Questions to Raise When Evaluating a Disciplinary (Writing) Text

1. How central is the text to the scope of our subject matter?
2. How well does chapter or text meet our objectives?
3. How much room is there for innovation: instructor- or student-generated topics, assignments, exercises?
4. How well does the text help students find relationships between the text and themselves?
    - A. Their analysis of the text
    - B. Their reaction to the text
5. Other comments.

Exercises for Students[3]

1. Outline a chapter of a text for an annotation exercise.
2. Make handwritten notes in the margins.
3. Draw a profile, contrasting sequencing, definitions, assignments, etc.
4. Rework actual assignments, definitions, etc., with WAC principles in mind.
5. Have students use complimentary texts for research. For example, in biology, students take notes on, say, zebra mussels, and shape into a short report. Give orally an interesting fact and opinion about the textbook. We evaluate students' written papers against the actual text. The advantages: The exercise guides students through supervised research; requires critical reading; keeps the class up to date; and frees our office hours from reviewing texts.